BULLETIN

MADRAS DEVELOPMENT SEMINAR SERIES

VOLUME III **NUMBER 7** **JULY 1973**

74, SECOND MAIN ROAD, GANDHINAGAR,
ADYAR, MADRAS-20.

MONTHLY BULLETIN

Vol. III No. 7

CONTENTS

			Page
1.	Editorial—Some Highlights	...	395
2.	Animal Husbandry in Tamil Nadu *By Rev. A. Devasia*, S. J.	...	441
3.	Social Sciences in Asia	...	459

EDITORIAL—SOME HIGHLIGHTS

I. General Economic Scene

State:

Fifth Plan: The first draft of the State's Fifth Plan (see Vol. III pages 225 and 307 of the Bulletin) is now under study and detailed project elaboration by the Government Departments. The State Planning Commission in finalising the draft will have to take into consideration and harmonise several factors. There is the technical preferences and detailed projects formulated by the Departments which must be matched with the overall plan strategy of the Government and the Country—the latter as set forth in the document of the Approach to the Fifth Plan—on the one hand and the specific and varied local priorities elaborated in the district plans (see Vol. III pages 155-156 and 225-227 of the Bulletin) on the other. There is the even more difficult task of the State Fifth Plan reflecting both in terms of proposed programmes and of policy instruments the agreed objectives which at the national level are set forth in terms of reduction of inequalities and self reliance involving nationally a 50 per cent increase in the expenditures of the poorest 30 per cent of the people, a 5.5 per cent growth including growth of food grains by 4.7 per cent and exports by 7 per cent per annum and which at the State level is yet to be quantified as far as reducing the impact of poverty is concerned together with a minimum needs programme, generation of employment for 32 lakhs of persons, a growth rate of 7.4 per cent, including growth of 6.5 per cent in food grains, etc. (see Vol. III page 307). These targets are fairly precise and if they represent the final decisions of the State Government, they must not only be translated into programme projects as has been done by the Commission and Departments, they must also be expressed in clear policy choices by the Government in terms of priorities for dry farming, for certain scale of investments with regard to power, institutional changes with regard to agricultural land holdings and urban house ceilings, subsidised food and other essential articles for the poorest sector which is to be lifted out of poverty, and far reaching educational and training changes which the employment and employability calls of the Fifth Plan demand. It is to this range of issues that the State Planning Commission is now addressing itself in presenting to the Government the final version of the Fifth Plan.

Perspective Plan: The Commission is also now resuming its work on the Perspective Plan for the State. The basic inputs for the perspective plan are now available in the reports of the 15 Task Forces, the 23 district development plans, the techno-economic surveys of Ramanathapuram and Dharmapuri districts and those under way of South Arcot and Thanjavur and the 8 regional plans which are nearing completion as well as the Madras Metropolitan Plan. With this infrastructure, the Commission is now turning to the Development of trends which is the essence of perspective planning. Medium term (5 year) planning is essentially a decision making process

against defined goals and comprises of a complex of resources bound projects and programmes. Perspective planning is the long term view of the development of the economy which involves the formalisation of the factors which determine the goals and the building of models of causative anticipation. There are four exercises of this nature currently under way in the Commission. The first is the tracing of the secular trends of the sectors and checking and ensuring their consistencies. The second is the study of the basic resources endowments of the State—water (for agricultural, industrial and domestic use), power, population, human resources and entrepreneurial projects—over the perspective plan period. The third is the study of the institutional changes that are needed and should be promoted over the period covering land policy including land ownership, tenure and forms of cultivation, price, wages and incomes policy within a national frame and management of public and private enterprises. The fourth is a study of setting up and operating a State wide distribution network of essential goods—both consumption and consumer durables—for the disadvantaged sector in the State. It is in light of the results of four studies to be undertaken by the Task Forces set up by the Commission, that the State's perspective plan will be formulated.

District Plans : In the last three numbers of the Bulletin summaries of 18 District Plans have been summarised. In this a summary of the five district plan is presented.

The Kanyakumari district like the Nilgiris district is a single development district and the plan divides it into 3 sub-regions with sub-region I a heavy paddy growing area, sub-region II more of a cash crop region and sub-region III agriculturally and industrially backward. The Fourth Plan performance indicates that little has been done to help the large number of small and marginal farmers, inadequate fisheries development despite great potential, poor road networks and maintenance and fairly good social services. Under these conditions the district plan proposes an outlay of Rs. 192.32 crores for the period 1972-84, with major emphasis on agriculture and allied activities which together account for 34 per cent of the proposed outlay. The proposed programme involves an Intensive Area Development Project, a rice research station in Theroor, coconut, tapioca, coco, mango and pulses development, a cattle development scheme and a large sized and phased fisheries programme. 12 large and medium industries are proposed including a Rs. 5 crore P.V.C. processing plant at Nagercoil, a Rs. 3 crore hydro - chloric acid plant at Arambazhi and a Rs. 2.5 crore cycle tyres and tubes factory at Kulasakaram. A large and comprehensive health, nutrition, family planning and drinking water programme calling for an outlay of Rs. 33.60 crores (17.47 per cent of the total) is proposed with rather small provision for education in view of the literacy attainment of the district. The Plan is a good starting point for local planning which needs to be further worked upon.

The perspective plan for the Chingleput South Development District divides the development district into 3 sub-regions, sub-region I which is mainly a wet farming area, sub-region II mainly a dry farming area, and sub-region III which is the industrial belt of the Madras Metropolis. Reviewing the Fourth Plan performance in the district, the plan calls attention to the low literacy level, the preponderance of agricultural employment, the absence of diversification in agriculture, the poor marketing infrastructure for the growing agricultural output, the unorganised nature

of dairy activities and good health and school facilities and programmes. Against this background, the perspective plan proposes an intensive agricultural programme to develop particularly the dry farming region—sub-region II, expand irrigation facilities and use of HYV and fertilisers, diversify farming through fruit farming and animal husbandry. For the primary sector the plan proposes an outlay of 24 per cent of the total outlay of Rs. 198.30 crores. In the industrial sector, the handloom industry with its 33,500 weavers is to be further developed, khadi and village industries promoted and a number of small industries financed at a rather small outlay of less than 4 per cent of the total—large and medium industries are to be financed by the Union Government or private sector. Health with its allocation of 13.89 per cent, housing with heavy emphasis on low income housing on which over R. 9 lakhs out of a total of Rs. 25 lakhs is proposed and a reformed educational system on which over 6 per cent of the total outlay will be expended are further features of the plan. The employment generated by these progammes is estimated at around 75,000 workers.

The perspective plan for Salem North development district divides the area into four sub-regions, — sub-region I — the Mettur Industrial Complex, sub-region II the dry tract with marginal rainfall, sub-region III the dry tract with good rainfall and sub-region IV—the hilly tract of the Shevaroys hill range. In assessing the Fourth Plan performance in the four sub-regions, a cost benefit analysis of two irrigation projects in sub-region II yielded the ratio of : 13. Food grains production in all sub-regions is insufficient in relation to the needs of the growing population and hence the need for an enlarged HYV, intensive cotton development and horticulture programme. Alkaline and saline soils have been a constraint and their treatment with gypsum is proposed. The perspective plan proposes an outlay of Rs. 384.14 crores for the period 1972-1984, with a major investment in the industrial sector. The Salem Steel Plant with a Union Government investment of Rs. 360 crores in this district has been taken into account in planning this large programme of large, medium and small industries. A stainless steel tubes plant with an outlay of Rs. 50 crores, an ammonium fluoride plant at a cost of Rs. 5 crores, a ball bearing plant with an outlay of Rs. 10.5 crores, a refractories plant at a cost of Rs. 5 crores plus several ancillary industries in the medium and small scale sector as manufacturing, processing and small tools units, in addition to a sugar factory and autombile ancillaries are proposed. On this industrial programme an outlay of Rs. 129.81 crores is proposed. In turn this programme calls for a nearby power development outlay of Rs. 57.33 crores, increasing housing at a cost of Rs. 46.59 crores and a communications network for which an outlay of Rs. 25 crores is proposed. Agricultural and allied activities including an intensive dry farming programme call for an outlay of Rs. 29.46 crores. Health, education and social services with an outlay of Rs. 116.61 crores provide wide and comprehensive coverage.

The perspective plan for Salem South Development District proposes an outlay of Rs. 129.47 crores for the period of 1972-84, against an outlay of Rs. 8.61 crores for the Fourth Plan period. The development district is divided into 4 sub-regions for purposes of planning—sub-region I the assured river irrigation belt, sub-region II—the dry area with meagre rainfall, sub-region III—the dry area with normal rainfall and sub-region IV—the Koli hills. During the Fourth Plan, sub-region I has done well with double cropping in paddy and cash crops. In

paddy cultivation, the Namakkal taluk has suffered from shortage of seeds and fertiliser use has been too uniform throughout the sub-region. Agricultural labour is paid low wages and suffers from under-employment. Social services are well organised. In sub-region II, soil and moisture conservation practices are primitive and the yield of cholam and cumbu below the average for the district. Milk yield is low and industry is limited to 11 agricultural processing units. Social and cultural services are adequate. In sub-region III, the water problem is a bottle-neck, and the yields of food and cash crops low. Industries include a cement factory, a lime kiln plant, a sago plant and 142 agro-industries and handloom. Only 22 per cent of the villages have protected drinking water, Sub-region IV shares the same problems as sub-region IV of the North Development District. In the perspective plan an outlay of Rs. 15 crores amounting to 11.56 per cent of the total is proposed for agriculture and allied activities. For power an outlay of Rs. 1.64 crores is proposed and generous provisions are made for further developments in industries (Rs. 11.82 crores), education (Rs. 14.76 crores) and medical services (Rs. 16 crores) and housing (Rs. 18.85 crores). Employment generation is a main objective in the plan and the training of personnel to meet the short supply of store keepers, boilers, assistant mechanics, electricians, etc. is proposed.

The perspective plan for the Dharmapuri Development District, one of the backward districts in the State, begins with an analysis of the socio-economic situation of the four sub-regions into which the district is divided. The main gap in the HYV programme is shown to be the shortage of HYV seeds, alongside of the lack of dry farming research efforts and poor fertiliser distribution. The road network and drinking water supply is limited and the social services are patchy in their coverage. Large industries are wholly absent; 3 medium scale ones and 220 small and cottage industries are in existence. Against this background, the plan proposes an outlay of Rs. 551.82 crores for the period 1972-84. The two innovations in the plan, which is based on the techno-economic survey of the district conducted by the Planning Commission, are the massive investment of Rs. 374 crores in the primary sector involving development of seed and seed farms, dry farming development, marketing and storage, development of milch animals, poultry, piggery and sheep, fodder production and an impressive minor irrigation works programme. The other innovation is the development of the industrial potential of the State through some 11 agro-industrial units at a cost of Rs. 20.66 crores—a cigarette factory (Rs. 4 crores), a ragimalt factory (Rs. 20 lakhs), fruit canning plant (Rs. 28 lakhs), fibre glass (Rs. 40 lakhs), steel products (Rs. 2 crores) and power looms (Rs. 2.40 crores), Social services are adequately provided with Rs. 80 crores. The total investment proposed is on the high side and priorities will have to be established in this attractive programme.

Power: The long range measures for overcoming the most serious aspects of the power crisis outlined in the last issue of the Bulletin (see pages 312-315) are now part of the Fifth Plan programme of the Union and State Governments. For the State the month of May witnessed a continuation of the 75 per cent power cut with some additional mishaps on the one hand and encouraging inter-State co-operation on the other hand. Living on the margin, the State is not able to provide for mishaps. As explained in the last issue, with the 75 per cent cut the current daily needs of 15 to 16 million units can

just about be met. But when at the end of April Neyveli had to be shut down temporarily for a few days, the resulting voltage fluctuation put out of commission the third 110 MW set at Ennore so that for a week there was serious shortage. Against the daily need referred to of 15 million units, Neyveli provides 7 million, Ennore 4 million Basin Bridge 1.3 million units and hydel sources 1.5 million. This razor thin equilibrium which is constantly upset by mishaps leads to constant load shedding all over the State. The continuous process industries have been most seriously affected with considerable waste of raw materials and loss of production. The industrial units around Tiruvottiyur and Ambattur have not been able to function on a certain basis. The Southern Railways goods movements have been disrupted. In early May 300 petrol and and other tankers were idling in the Tondi arpet yard as the IOC could not maintain its unloading schedules. In fact the Tondiarpet marshalling yard was able to clear only a little over half its daily handling of 2,000 wagons and 30 trains. The industrial performance of the State for both last year and this year is sure to be seriously affected when the two years performance is computed. The other side of this crisis situation is that it has led to improved and increased inter-State power transmission. Tamil Nadu's peak load demands will for some time be assisted by Mysore which received back the loaned power at night through the 220 KV line which connects the Tamil Nadu and Mysore power systems. Similarly the Mysore and Kerala systems are linked through 110 KV single circuit lines and Andhra Pradesh and Mysore connected through a 220 KV line. Kerala's total power supply to this State increased from 3.5 lakh units per day to 5 lakh units from the end of April with further supplies if its hydel storage improves from the May rains. In return Kerala received 910 tonnes of cement daily. Similarly Maharashtra is supplying daily 1 lakh units in return for which it receives 75 per cent of the additional yarn produced and 66,000 units (as reported in the last issue) for which it receives 600 tonnes of cement a day. The cement plants in the State need 8 lakh units per day for their full functioning. Now all attention is concentrated on the June rains in the Nilgiris to relieve the immediate power shortage in the State.

Water: The problems of the water resources of the State, the southern region and the Country are still under discussion. The proposal to declare river waters a national asset which will call for a constitutional amendment is the subject of consultation between the Union and State Governments, as is the plan for a water resources council (see Vol. II No. 8 pages 9 and 10 of the Bulletin). There is a strong case for river waters being dealt with as a national resource and its use planned on a regional base, as the experience of the four southern States is increasingly pointing to. The Cauvery waters issue is now being further examined by the Fact Finding Committee on two further points—the amount of the Cauvery waters being used by each of the three States and the extent of the lands irrigated by the Cauvery in the 3 States (see page 315 of the last issue). On receipt of this second report, the three Chief Ministers of Tamil Nadu, Mysore and Kerala meeting with the Union Minister of Power and Irrigation will need to resolve two issues, (a) the allocation of the available water among the 3 States, and (b) the methods of regulating this allocation. These two decisions can be negotiated and resolved on the basis of the agreement already established on the quantum of available water. Thereafter the review of the execution of the agreement should

become a part of the normal function of the zonal council.

Water supply to the city is in a satisfactory state—the summer supply has been increased by 2 million gallons per day and for 4/5 of the water (40 million gallons) mechanical filters are in use. With the completion of the Veeranam water supply scheme by the end of the year, the water supply and distribution system in the city will be in a satisfactory situation.

Transportation: Rural communication which needs continuous improvement in the State will receive such a lift with the Rs. 14.1 crore plan for village and link roads in the Cauvery delta which is heavily dependent on the road system in the limited railway facilities available. The traffic density on the roads which doubled in the fifties in the Cauvery delta area will increase five fold during the seventies according to traffic studies of the area. The traffic of motor vehicles alone is increasing at an annual rate of 2.6 per cent. Behind those ario statistics is the fact that the success of the IADP programme and the newly introduced multiple cropping patterns in the district depend on the development of village roads and link roads to the harvesting sides. About half of the 3,160 villages in the delta area have no roads which can be used during the monsoons. The plan is now to build 125 kms of new roads, metal 275 kms of existing roads and improve and make usable by trucks 1,800 kms of bank roads. Another development in the State is the profitability of the various State transport corporations around the pioneering programme of workers' participation in the management of the corporations. The first year of the operation of the Cheran Transport Corporation ended with a profit of Rs. 32.19 lakhs with a doubling of the number of buses and employees. The first operating year of the Cholan Transport Company similarly recorded a net profit of Rs. 2.10 lakhs. It is very important that the public enterprises should be run at a profit and should contribute both to public savings and public investment. In this regard the State Transport Corporations may set a sound example. The other equally important innovation is the scheme for employees participation in the capital and management of the State Transport Corporation. On May 7, this programme was launched in Cheran Transport Corporation under which 1,178 employees out of a total of 1,500 have offered to take shares in the Corporation and who have been given convertible debentures with 8 per cent interest and the option to convert these debentures into ordinary shares. This first effort to share the share capital and management with workers begins in this State with the nationalised transport undertakings because in this sector the efficient functioning, the maintenance and full costs and the service to the consumer all depend entirely on the workers, who have no supervisors over them and who are for the most part out on the road. The State's nationalised transport system will have 1,00,000 workers and they are now made partners in this enterprise. The full scheme involves: (a) employees subscribing upto 24 per cent of the equity capital through shares; (b) the shares should carry a minimum guaranteed dividend of 8 per cent; (c) this minimum should be allowed as an item of expenditure for the firm and income tax should be levied after this is deducted from the income. All these 3 provisions call for amendments to the Indian Companies Act, which does not visualise workers' participation. Pending the Union Government modifying the Act, the State Government has issued 8 per cent convertible debentures to the employees allowing a period of 10 years for conversion of debentures to equity capital and various provisions for

ensuring that all new workers are participants in the scheme and the shares remain in the hands of the employees of the Corporation in the event of death, disability, retirement, or resignation of any employee. This is the first time this worker participation scheme is being tried out in the Country. It will face the usual problems of any innovation but it is one fraught with important economic and social gains for the individual and society and must therefore be watched and nurtured with all possible care. One other matter the Gemini fly over in the city will be finally opened in early July. It is making smoother running of traffic at this important intersection. Already it is proving inadequate in relation to the east-west traffic which is rapidly expanding. The new techniques used in its construction will be of use in the construction of the other parts of the Metropolitan Plan—the north-south parallel road and the underground railway (see Vol. III page 91 and 164).

Improved PWD : The State Administrative Reforms Commission's proposals for the reorganisation of the PWD is the second reform proposal and is part of the responsibility for helping to rationalise and stabilise administration in the interest of economy and improved execution. In the PWD to start with, the senior officers should be relieved of their routine work so that they can give more time to supervising ongoing projects and ensure quality performance. In order to counter obsolescence and provide incentives to improved performance, refresher courses and specialised training programmes for young officers and serving engineers who should be recruited at the level of assistant engineers so that they can be promoted and moved around between establishments have been proposed. The department's establishment practices and system of auditing are also to be changed in order to promote high quality work and not simply the fulfilment of financial targets. Other recommendations include the setting up of an institute of building research, the organisation of a semi-autonomous agency of architects and the coordination and closer supervision of irrigation work, including legislation for a water management authority and prevention of over use of irrigation water by farmers. These proposals will make for an effective and efficient functioning of the State's Public Works Department.

Rural and social development: The Tamil Nadu occupants of kudiyiruppu Act which is a part of the agrarian reform programme of the State, introduced in January 1972 in Thanjavur conferring ownership rights on agricultural labourers and farmers occupying any house site on 19 June 1971, and later extended to Chingleput, North Arcot South Arcot, Tiruchirapalli, Dharmapuri, Salem and Ramanathapuram district was in April further extended to the districts of Kanyakumari, Tirunelveli' Madurai and Coimbatore. Thus over the greater part of the State, the poorer sector has been provided house sites as the means of guaranteeing to them adequate housing. In addition the State is planning to acquire 2,690 acres for housing 1.14 lakh landless labourers at the rate of 4 cents per household. This is a Union Government scheme, under which the State Government has acquired 161 acres by May. For financing the houses 950 house mortgage societies affiliated to the Central Mortgage Cooperative Housing Society will be provided the needed loan finance as well as the Rs. 75 lakh scheme under which any one with unencumbered land and Rs. 1,000 can obtain Rs. 3,000 from the scheme for house building. To top off the whole rural housing programme a rural housing

cell has been established in the Tamil Nadu housing department to (a) prepare village housing maps for every one of our 15,700 villages (such maps have been prepared for 1,500 villages) and (b) undertake research on use of local building materials to bring down the cost of housing. Thus rural housing in the State will be catching up with the progress made in urban housing (see Vol. III pages 163-164 and 233).

The housing programme has however not yet visibly helped the scheduled castes and tribes in the State who according to the 1971 census number 7,313 lakhs and 3.3 lakhs respectively out of the total State population of 41.19 million. For this the State has a Rs. 10 crores Fifth Plan for Harijan housing on which Union Government aid has been requested. Currently Rs. 5.6 crores are spent on harijan welfare with some effect on their education. Tribal education which could cover 1 lakh children however extends only to 5,000 because of lack of adequate institutions and hostels. As for other aspects, such as untouchability, drinking water, temple entry and inter-dining, etc., not much progress is recorded. The Government is increasing police enforcement of anti-untouchability provisions, planning an extensive programme of water supply, housing and education and has proposed to the Union Government strengthening of penal legislation for offences against temple entry, drinking water facilities, etc. Another social land mark was the opening at the end of April of the seventh of the 10 leprosy rehabilitation homes at Pudupatti near Madurai at a cost of Rs. 10.2 lakhs. Now provisions exists for rehabilitating all the leper—beggars in the State and what is needed is cooperation from the public who should not defeat the purpose of this programme by misguided acts of private charity. The first 16 persons under this programme were placed in employment as at the end of May.

National

Budget and Finance : The finance bill as summarised in the April issue (pages 234-236) was passed by the Lok Sabha with 4 minor modifications which reduces the tax revenue by Rs. 2 crores to Rs. 290 crores. The concessions include (a) deducting agricultural income tax from the integrated computation, (b) reduced duty on cellulose nitrate sheets to help the Jessore comb makers, (c) relief to small manufactures of blended and lubricating oil by raising their tax exemption limit and (d) withdrawing the 10 per cent duty on carbon black to help small producers of pigments and dry colours. Taking the budget classification for the current year, 53 per cent of the budget expenditure is on economic and social service compared to 51 per cent last year. General services and defence take up 28 per cent and the rest is for grants in aid to States, wages and mass advances, foreign aid, etc. The total Union Government expenditure shows a slight decrease for this year (2 per cent) compared to last year. 40 per cent is public consumption and capital formation and 60 per cent various forms of disbursements. Consumption expenditures are 30 per cent of total expenditure, increasing by 4 per cent compared to last year's twenty six per cent and gross capital formation is 38 per cent of the total. Net capital formation and net savings by the Government are Rs. 759 crores and Rs. 846 crores compared to last year's Rs. 635 crores and Rs. 485 crores. In general the budget is increasing in the desirable direction in terms of economic and social services, wages and incomes and savings and investments. In this connection work on the formulation of a comprehensive incomes

policy should now start as part of the incomes profits and price policy proposed in the Fifth Plan. In both market economy and socialist countries an incomes policy has come to be accepted as part of an employment, investment and development programme. In our Country, we have to make a start with collecting data on incomes distribution to include wages in the organised and unorganised sector, salaries, profits and on that basis determine the shares of each. In the end as pointed out in the last issue of the Bulletin such an incomes policy is at heart of the programme to counter inequality. In this regard fiscal measures which are the first line of attack against inequality, the new Taxation Laws Amendment Bill introduced in the Lok Sabha in May aims at (a) preventing ostentatious expenditure out of undisclosed income and (b) makes unexplained expenditure taxable as income. This is a good first attempt at unearthing black money and stopping tax evasion. Its main effect is that it continues the tradition of selective implementation of the Wanchoo Committee recommendations (see Vol, III page 234). The Bill has been referred to a joint committee of Parliament. It can introduce some order and integrity into our household accounts as well as those of business. Similarly both legislative and administrative action is being taken to check the leakage of Rs. 50-70 crores in foreign exchange through various manipulations of our various foreign exchange trade channels. The study team dealing with this issue has made 220 recommendations, most of which are within the executive discretion of the Government and on which a positive decision has been taken. On May 12 the Union Government's first stage public borrowing was launched under which three loans of Rs. 500 crores—4.75 per cent loan 1980, 5 per cent 1984 and 5.75 per cent 2003 were subscribed. The total subscriptions were in excess of the notified amount and so under the 10 per cent excess production, the net borrowing amounts to Rs. 155.33 crores. Gross borrowings for this final year of the Fourth Plan have been fixed at Rs. 880 crores and with Rs. 553.59 crores maturing loans, the net borrowing resources available to Government will be Rs. 326.41 crores. At this rate the gross borrowing for the year is likely to be Rs. 968 crores rather than Rs. 880 crores. As the subscriptions are by the banks, this exercise does not represent increase in the savings of society. It does withdraw resources from the banking company.

Food supply and take over : The second month of the take over of wheat witnessed a continuation of the procurement and distribution problems analysed in the last issue. The procurement operation registered some improvement in wheat which by May 16 amounted to 1.9 million tonnes against the target of 8 million tonnes which is both unlikely to be attained but which is insufficient. In the case of rice by mid April 2.16 million tonnes had been procured against a target of 4 million tonnes, a target which will not be reached. The procurement situation is a little confusing because the Government presents an optimistic picture whereas members of Parliament and State legislatures underline the poor procurement operation due to withholding of stocks by farmers. In Bihar where there has been a bumper crop of 3.3 million tonnes compared to last year's 2.5 million tonnes, only 4,200 tonnes had been procured till May 11 against the modest target of 6,00,000 tonnes. In Madhya Pradesh, out of the 1 lakh tonnes of wheat procured, 94 per cent was from levy and only 6 per cent in the open market. In Haryana 2,65,841 tonnes have been procured as of May 17 compared to 2.92 lakh tonnes of arrivals on the market.

In UP out of 80 lakh tonnes of production only 1.21 lakh tonnes have been procured. In Orissa against an estimated 1 lakh tonnes production only 38 quintals have been procured. In Himachal Pradesh 2,700 quintals have been purchased against a target of 35,000. It is only in Punjab that the production which is 58 lakh tonnes and the target 34 lakh tonnes, the procurement is proceeding normally at over 2,40,000 tonnes within the first few weeks. One problem that is hindering smooth procurement is the widening gap between the open market price of Rs. 110 to 150 per quintal and the price offered by the Government which ranges from Rs. 72 to 82 per quintal in Madhya Pradesh, in Bihar the gap being between Rs. 100-110 per quintal and Rs. 76 and in Orissa Rs. 100 and Rs. 76 per quintal. A second related problem has been that by the end of April the buffer stock which stood at 9 million tonnes in July 1972, reduced to 5 million tonnes by October 1972, was completely depleted by the end of April and there has been talk of importing six to seven million tonnes of food grains which may become necessary if the monsoons fail again this year. The June decision to transport 2 million tonnes of wheat is related to (a) the reluctance of the farmers to sell their wheat at the procurement price, (b) the shortfall in the rabi production target and (c) the need to tide over the two months before kharif harvests bring in wheat—as the current 4 million tonnes buffer would have been exhausted at the rate of consumption of 1 million tonnes per month. A third problem is that the estimates of the wheat production as a result of the emergency rabi programme (see Vol. II pages 238 and 239 and 247) still vary rather widely. The wheat output for 1972-73 which was expected to be 35 million tonnes as a result of the Rs. 300 crores pumped into the rabi emergency programme is now expected to be only 30 million tonnes or even less (compared to 26 million tonnes of the year before). The precise wheat output for the season will be known by the time of the next issue of the Bulletin. Fourth as a result of the depletion of the buffer stock and the slow arrivals of the produce to the market, the FCI is operating on a hand to mouth basis. In addition to the state of procurement in the States referred to earlier, in Gujarat wheat arrivals were 50 per cent in early May compared to that time last year, in Maharashtra with drought conditions, wheat disappeared from the open markets when the take over was announced, in Assam and West Bengal the arrivals are nil or very low, and in Rajasthan against a target of 3,00,000 tonnes, 974 tonnes were procured. As a result the wheat procured is sent directly to the food deficit States. This mandi to mouth operation involves moving about 1 million tonnes of wheat every month from the mandis in Punjab, Chandigarh and UP to the 5 deficit States. In May, 13 special trains were moving food every day from Punjab and Haryana. Under these conditions and in light of the programme of action outlined in the last issue (pages 324-327) it is necessary that the Government goes in for compulsory procurement as it has done in Madhya Pradesh and sends its buying agents to the farmers' threshing floor to speed up arrivals and achieve the procurement target. While the principle of not changing the procurement and issue prices during the harvest season in the middle of the operation is sound, the widening gap between official and open market prices calls for using some of the provisions in the price system to provide the farmer some incentive to market his produce. Further the kharif sowing programme with a target of 67 million tonnes of food grains should now be planned on as massivea scale as the rabi emergency plan in order to induce

the large farmers who, as pointed out in the last issue, are the ones holding back their produce and who will begin to unload *if the kharif prospects* are bright. Finally the distribution network must be improved, retailers regulated, *fair price* shops adequately stocked and cooperative purchasing procedures made more efficient. In light of this experience the take over of whole sale trading in rice, which is much more complex, should now be carefully planned and proceed in phases with control and take over being worked out in all their procedural and policy details.

Roads: The Fifth Plan provision for roads will depend partly on the Fourth Plan performance (physical and not merely financial) and the needs of the Fifth Plan. From the point of performance in the current Plan the shortfall in achieving the physical targets is due to poor machinery, wasteful procedures and lack of adequate project preparation. The global figures cited on performance as between 1947 when there was 1.45 lakh kms of surfaced roads out of a total of 3.8 lakh kms while in 1972 the comparative figures are 4.3 lakh kms and 7.5 lakh kms is less significant than the fact that our national highways have increased only by 4,000 kms during this period. The task remaining is indicated by the fact that an investment of Rs. 500 crores would be needed if every village with a population of 1,500 or more were to be connected with others through a metalled road. In view of our resources constraint, the road programme should be planned not only in relation to the criteria of population size but primarily on the basis of providing the maximum number of villages with the same road—a kind of multi-village road both as a means of opening up their access to markets and as a means of development of our backward areas. For the Fifth Plan an outlay of Rs. 1,750 crores is being proposed by the chief engineer (PWD) for new roads as well as Rs. 929 crores plus 20 per cent for meeting the rise in wages and raw materials prices, giving a huge total of Rs. 3,299 crores. This is not as daunting as it looks as it includes both Plan and non-Plan expenditures. It needs to be broken down into projects, particularly updated district road plans which should be part of the total district development plan into which the road network would be fitted in as an integrated development plan, allowing for the contributions in kind of the village, panchayat union and block level agencies and people.

National Production Front

Public sector performance: With regard to public sector performance summarised in the last issue of the Bulletin (see page 328), the Bureau of Public Enterprises study of 8 public sector enterprises ranging from Rourkela, BHEL to FCI and the two performance reviews of the Sindri Fertiliser unit and Hindustan Cables under way have indicated ways and means of improving the organisation structures, the management systems and personnel policies which if put into operation will considerably improve performance. One general and major source of falling output and under capacity use is the poor state of equipment maintenance in all sector units brought out in the general survey of all public sector enterprises. Management should be held responsible for ensuring adequate maintenance of equipment and a regular periodic reporting system needs to be enforced in all of them. As a further measure to increase their operational efficiency and reduce losses (cumulatively it is Rs. 350 crores per annum on an overall investment till recently—see Vol. III page 13, 172), the Government has laid down some important guidelines for public sector pricing policy. In the case

of goods and services produced by them which compete with those of private sector firms, the prices should be based on prevailing market prices. In the case of goods for which the public sector plant has a monopoly the price should be below the landed costs of comparable imports. This is part of the problem of defining the purpose of a pricing policy. Here the purpose is clear. It is not to cover the losses suffered by firms like HSL, Indian Drugs, etc. It is to make available goods at competitive prices, stimulate demand and so increase their profitability. This year's balance sheet of the public sector units should indicate the extent to which the new pricing policy makes for improved performance.

Steel: Hindustan Steel has put this policy into operation by cutting its prices by Rs. 1,500 per tonne, which is a 50 per cent reduction for varieties of alloy steel and tools produced by it. This is a remarkable turn around of its policy of fixing its prices 100 per cent above the imported goods and forcing consumers to purchase the high priced steel through its package deals. This new pricing policy and distribution through large trade associations, saving its having to distribute its products in small lots, should have a high pay off. Meanwhile steel production in April and May has suffered a series of set backs. TISCO with its high output (see Vol. III p. 328) closed down in April due to power shortage—the DVC supply falling from 96 MW to 36 MW. The result of the close down has been a reduction in production of 2,163 tonnes of ingot steel and 8,187 tonnes of saleable steel. Bhilai production also was cut in April/May because of the shut down for capital repairs and shortage in coking coal. IISCO ended the year March 31, 1973 with sizeable reductions-from 5 takh tonnes last year to 3.5 lakh tonnes of saleable steel, from 9.11 lakh tonnes to 6.99 lakh tonnes of pig iron and from 6.17 lakh tonnes to 4.31 lakh tonnes of steel ingots. It is a long way off from its 1973 target of 5.03 lakh tonnes of saleable steel and 6.48 lakh tonnes of steel ingots. Rourkela and Durgapur are the only two units which record increasing output in April. For 1973-74 a conservative demand estimate for finished steel is 7 million tonnes, and with all the units resuming normal production, domestic availability will be 5.5 million tonnes. It is particularly unfortunate that our import requirement is increasing to 1.5 million tonnes at this time of a tight international steel supply market and fast rising prices. The combination of international forces which make for this situation is the end of the US recession resulting in a 50 per cent increase in its steel imports last year and this year, the demand of the Soviet Union and the socialist countries for Japanese and German steel for the first time; the increase in freight rates (due to the demand for shipping of vast quantities of food grains by China and USSR), resulting, for instance, in a 40 per cent increase in freight charges of Japanese steel imported to our Country; and the international monetary crisis resulting in Japan and Germany our two main steel suppliers demanding to be paid in their currency and not dollars. This means that Japanese steel is now 40 per cent higher than 12 months ago. This means that to import 1.5 million tonnes of steel this year we will have to pay in scarce foreign exchange 30-40 per cent more than what we paid last year. 25 per cent of our steel imports will come from the rupee payment area but this is no relief because this area is itself a net importer of steel and its prices have always been higher than those of Germany and Japan. Under these conditions the canalisation of imports through the HSL can be a positive element in

making for economy in use, its further economies in bulk purchases which attracts Japanese producers and in evening out price rises through the price equalisation mechanism it operates. Further action in this difficult situation is through further standardisation of the quantity of our requirements and a streamlining of our procurement and distribution machinery.

Minerals: Minerals production last year has been estimated at Rs. 507 crores —a rather small contribution to total output. In part this is due to the neglect of this area and the late and slow start made in minerals development. The First Plan outlay was Rs. 1.06 crores, the second Plan Rs. 73 crores on to Rs. 456 crores in the Fourth Plan. The Fourth plan contribution of this sector in four years has been Rs. 1,044 crores compared to Rs. 969 crores in the Third Plan. The major mineral is coal which last year despite the power shortage and transport bottleneck contributed 75 million tonnes, This is one area in which a concerted effort should be made in the Fifth Plan.

Sick Units: The Department of Company Law reports that in the first six months of the last fiscal year 231 companies with a paid up capital of Rs. 317.5 crores were liquidated. Action is urgently necessary to detect ailing units and advise and regulate their programmes and operations so that they do not become sick units, which have to be taken over by the Government at considerable cost to the tax payer or liquidated, throwing out of employment its workers. The size of the problem can be seen in the fact that during that period the department launched 2,856 cases against 1,270 companies making an accumulated total of 7,958 cases. 3,061 cases were decided in which total fines with cost of Rs. 5.7 lakhs were awarded—what is needed is, however, even earlier action to companies which are not filing returns and not holding annual general meetings and subject them to investigation and special audit. This would provide for each such ailing unit a set of marginal and operating instructions on which the company should be required to act before it moves into the sick category—at which point remedial action becomes late.

Cement: Cement production in 1972 amounted to 157 lakh tonnes which was 82.6 per cent use of capacity. The first quarter has registered a decline to 78 per cent capacity use due to several factors including wagon shortage, power shortage and labour unrest (see Vol. III page 99). But the cement industry problems also include more serious long term factors. During the Fifth Plan, the target of 32 million tonnes that will have to be achieved will require 12.5 million tonnes of additional capacity. On the face of it, the situation appears satisfactory. The plants of the cement corporation of India and the State Governments are planning to expand their production by 6 million tonnes by the end of the Fifth Plan. Of the 8 million tonnes expansion licensed of existing units, 4 million tonnes are estimated to materialise. The remaining 2.5 million tonnes are proposed to be earmarked to the larger house—ACC, Dalmia and Berta groups. This is one reason for the Union Government's decision in early May reaffirming its February decision on industrial licensing, to allow larger houses to expand their capacity. But the real situation portrayed both by the Secretary to the Ministry of Heavy Industry and in the May discussions of the tariff commission is that no new investment is being made in the cement industry. The reason is that it does not offer a sufficient level of profitability. The reasons are well known. There is the high cost of

machinery and in this regard machinery manufacturers are holding back primarily because of the uncertainty as to whether they should produce the 2 lakh tonne capacity machine for which they have the know how or the 4 lakh tonne capacity for which the know-how will have to be imported. Till this issue is clarified by the Government and the cement industry and the *import facilities made* available, investment will not move into the industry. Then there is the question of the price of cement and the ending of the development rebate in 1974. On this the industry made a strong case to the Tariff Commission at its May sitting that the rehabilitation and development needs of the industry. Without going so far as their demand for a price escalating mechanism to move with the price of its inputs of coal, electricity and spares, there must be some increase in the price which forms certainly more than the delayed 5 per cent of the building cost and will have to be borne by the consumer. Then there is the labour situation when the statistics presented to the Tariff Commission of 1.25 lakh workers in 19 factories producing 1.5 million tonnes in 1947, while in 1973 there were 79,000 workers in 54 factories producing 15 million tonnes. This and their claim for the same rate of wages as those of the steel workers needs careful investigation. And finally there is the problem of adulteration suffered by the consumer calling for regulatory distributing agency. There are only a few months for all these various factors, including coordination with the output of 2 milllon tonnes slag granulation plant at Bokaro to be settled and policy established if the industry is to play its role in the Fifth Plan. For the present year the power and transport situation should soon be cleared up and the atmosphere for increased new investments should be created.

Sugar: Sugar production for this season is expected to be 38 lakh tonnes, during the first six months beginning October 1972 the production was 33.15 lakh tonnes. For the next season, the prospects are even more hopeful at 42-45 lakh tonnes. Despite this good supply position, sugar prices increased sharply all over the Country in May by as much as Rs. 34 *per quintal. This rise which gives* urgency and relevance to the deliberations and recommendations of the sugar enquiry committee (see Vol. III pages 98-99, 176 and 246), is in part due to speculative trading and hoarding, the industry not deserving the rule to dispose off 20 per cent of the weekly allocations and the inefficient handling of levy sugar by the marketing federation and not feeding the fair price shops in time. There are 220 sugar mills in the Country 171 in UP, 30 in Bihar, 6 in Tamil Nadu, 7 in Andhra Pradesh, 5 in Gujarat, 4 in Punjab, 2 in Haryana, and 1 each in Assam, Orissa and Rajasthan. Of these there are 70 co-operative sugar mills and 4 public sector mills. The issues before the committee are: should the sugar industry be nationalised for reasons given in the last issue? or should there be State take over of sick mills (30) or all losing concerns (50) and after rehabilitation not return them to the owners? In either case, should there be a national sugar authority which will take charge of the entire marketing of sugar and perhaps gur and khandasari also which take 60 to 65 per cent of the cane produced annually. Such an authority can ensure a stable price, avoid the current constant fluctuations and ensure fairness all round to the consumer, grower and producer.

Cars: The three stage policy in expansion of car production involves fair and maximum use and capacity of existing units, second expansion of public sector

units and finally approval of new units. We are still in stage one and the beginning of stage two. Against the estimated demand of 80,000 heavy vehicles present capacity is only for 50,000 vehicles. Hence the Shaktiman public sector plant of the Ministry of Defence is being expanded to meet this shortage. In the automobile production area—as in the area of cement machinery, the urgent need is for standardization of machinery and both the expansion schemes and the renewal of collaboration arrangements, most of which expire at the end of the year, will be made to contribute to this purpose. Such stanndardisation is also in line with the major objective of concentrating on essential goods.

Cloth: The combination of yarn shortage (last issue page 349 of the Bulletin the mess over the import of Sudanese cotton caused by the prolonged negotiations between the CCI and the mills, the import duty on raw cotton and speculative trading has led to a serious distortion in the structure of cloth prices. Under these conditions the voluntary price restraint scheme by the Bombay cotton mill industry is a move in the right direction and its effect should be watched for future pricing policy. Under the scheme which will operate till September mills will restrict the rise in prices of all varieties except the super fine—that in coarse, lower medium, higher medium and fine—to a maximum of 8 per cent over the January prices. What is equally important is wholesalers are being requested to limit their margin to 5 per cent on all these varieties. On the basis of this experiment, the scheme will be extended to other areas and States.

Agricultural Production: The tobacco output of the season is around 350 million kgs, a 10 per cent reduction compared to last year, due to the drought in the tobacco growing areas of Maharashtra, Mysore, Gujarat and excessive rains at the post-planting season in Andhra Pradesh. As a result the virginia crop—which is the export earner—was lower at 90 million kg compared to 130 million kg last year, the special programmes for growing virginia tobacco in light soils had to be curtailed to around 30,000 hectares. Plans are under way to make available healthy seedlings to farmers in Andhra Pradesh, Mysore, Tamil Nadu and other States, to increase next year's crop and meet the new export markets opened up in the USSR and Bangla Desh which helped this year to increase our tobacco export earnings to Rs. 63 crores from Rs. 42 crores last year. This year's irrigation programme involves special allocations to 20 irrigation projects which the Union Government regards as rational. These projects are spread mainly in the north and central Indian States and are being operated jointly by the States with financial and some technical aid from the Union Government.

Exports: Further details for February are available with regard to the export performance analysed in the last issue of the Bulletin (page 334). In February exports reached Rs. 146 crores making the first 11 months add up to Rs. 1,703 crores (with an excess over the Rs. 1,760 crores reported in the last issue). This makes the first 11 months export growth record a 20.8 per cent rate over the same period of 1971-72. The February figure was 12.9 per cent higher than the February 1972 performance. Engineering exports for the year 1972-73 amounted to Rs. 135 crores —below the target—can in view of the growing export market reach the Rs. 200 crores fixed for this year and Rs. 500 crores by the end of the Fifth Plan. The major problems faced by the engineering

industry in the export field call for early action by the industry and the Government. They include the need to expand capacity, update its technology, meet shortages in critical raw materials, make up financial needs called for by fluctuating exchange rates and ensure a steady scale and quantum of export incentives and assessment. With the number of countries offering GSP and tariff reduction (Australia, EEC, Japan, Brazil, Iran, Taiwan, Hong Kong, and South Korea), the engineering export market is an expanding one with opportunities for rapid growth open to the industry in the Country. The India-Sri Lanka April agreement also demands cooperative effort by the 2 countries in rubber, mica, graphite, sheet glass and refractories, with India helping Sri Lanka to set up industries in these fields with Indian capital participation, if necessary. In the first half of last year—1972-73—the Soviet Union emerged as the largest importer of Indian goods at Rs. 149 crores which was a 50 per cent increase over the preceding year's record, followed by US UK and Japan. India's exports of manganese ore to Japan will profit by a 15 per cent price rise accepted by Japan with a similar rise in the price of iron ore exports being exported. On the other hand, the long and sad stay of India's exports of wagons to Yugoslavia (see Vol. II No. 11 page 15) suffered a further hold back due to the power shedding of the Calcutta plant and the 50 per cent cut in Rajasthan workshop. This will involve a further six months delay in completing the export order for 3,600 wagons.

Aid: The US President in his foreign aid budget proposals to the US Congress has provided for aid to India amounting to $75 million subject to a settlement of Indo-US relations and is meant to aid the Country's power and fertiliser projects. As noted in earlier issues (Vol. III pages 21, 102, 186, 250 and 251), the US has since 1971 granted India $29 millions in debt relief aid $87.6 millions which was unfrozen from the 1971 pledge. Whatever may ultimateiy emerge from the budgetary provision, the major issue is for the 2 countries is to settle their PL 480 debts. The total value of commodities supplied to India up to 1 April 1971 was $4,787 millions, of which 10 per cent had to be repaid in dollars. The position is this—out of our total foreign debts of Rs. 7.161.25 crores, the US share is Rs. 3,601.78 crores as at March 31, 1973. In this US loan figure, the PL 480 loans amount to Rs. 1,596 22 crores. Within this the convertible currency loan is Rs. 59 crores and PL 480 deposits with the Reserve Bank are Rs. 623.87 crores against which the US embassy has been given special securities carrying an interest of 1.5 per cent annum. The problem with this loan is economic and political. On the economic side, like all loans, their repayment constitutes a problem. At present the repayment of interest and some principal comes to Rs. 80 crores per year. The terms of the PL 480 loan build up future sizeable repayment obligation. The terms are a 10 year grace period during which an interest of 2 per cent is charged, followed by repayment to avoid a future heavy accumulation of interest and principal repayment charges. There should be an early agreement between the 2 governments to regulate this loan. One way would be for the loan to be used for funding a number of development programmes in the Country by mutual agreement between the 2 governments. A second possibility would be for the whole amount to be constituted into a development fund owned by the US Government with its interest expended on mutually agreed programmes. The political issue is that it is irritant—emphasising the

creditor-debtor relation in an atmosphere where there is still suspicion and distrust on both sides. The PL 480 funds issue should be settled at an early date. Further to India-UK agreements referred to in the last issue of the Bulletin (Page 341), the UK signed a Rs. 6.26 crores agreement for import of components and raw materials for the manufacture of steam generating boilers. From January 1974, UK will have to apply the EEC tariffs to Indian goods and India will be losing preferences on £100 million of imports. Also articles like tea will face stiff competition from other producing countries. The time is short (6 months) in which some kind of salvage operation can and should be effected with the India-EEC trade and the Belgian Foreign Trade Minister's visit to India was an occasion to discuss this issue with particular reference to Belgium's interest in India's export of jute and jute products and coir products.

International :

Bangla Desh : Bangla Desh's First Five Year Plan starting this year (see Vol. III page 337) has fixed its export target for the first year at $424 3 million which is a 13 per cent increase over its foreign exchange earnings in 1972-73. The major export targets are $166 million from raw jute, $179 million from jute goods and $16 million from tea. The export drive and production effort that these targets call for are well within the capacity of the Country. India-Bangla Desh trade and the working of the agreements referred to in the last issue of the Bulletin (page 337) have been reviewed and future directions established. To make up for the Bangla Desh deficit under the limited payments agreement now amounting to Rs. 2 crores and likely to increase as the target of Rs. 25 crores for each side is reached, it has been agreed to increase jute imports into India by Rs. 2.5 crores (from Rs. 7.5 crores to Rs. 10 crores), and increase the purchase by India of newsprint and fish from Bangla Desh. Bangla Desh has also offered Rs. 10 lakhs worth of cables. Talks are also under way for permitting frontier trade between Meghalaya and Bangla Desh under which an authorised number will visit village fairs in each other's countries and exchange commodities. In addition a comprehensive railway agreement between the 2 countries has been concluded under which an Indian credit of Rs. 8 crores will be made available for purchase of railway stores, and the restructuration of bridges, tracks and telecommunication system. In addition provision is made for the inter-change of wagons carrying goods on Government and private account at six points in the two countries. This will improve and provide an essential infrastructural develment. Discussions are also under way for the Cotton Corporation of India to supply in the 3 months 30,000 bales of long staple cotton (valued at Rs. 4.5crores) as a means of helping the Bangla Desh Textile industry to obtain its raw material for this year.

Monetary crisis and monetary reform : While international monetary reform proposals are still under debate and an area of wide disagreement both between the developed and developing countries and among the developing countries (see last issue page 342), the international monetary crisis is deepening. May saw the price of gold cross the $100 per ounce limit and on May 15 in the Paris Free Market reached the record level of $124.3 an ounce. It has stayed at around $110 per ounce through the month—a long way from the $42 per ounce at the start of the decade. This soaring of the gold price is a simple and clear index of the currency muddle that we are in and is an expression of the

confidence crisis in the uneasy monetary arrangements, notably the floating rates established for the European countries as outlined in the last issue of the Bulletin. The causes for this part of the crisis is basically the weak position of the dollar and the gathering loss of confidence in it. Behind it is the massive US balance of payments deficit for the first quarter of 1973 announced by its department of commerce at $10.2 billion. This is the largest quarter deficit since the third quarter of 1971 when it was $11.9 billion. The US ascribes this to the very large capital outflows from the country as a consequence of its February 12 devaluation, and the floating of the Italian and the Swiss Franc. One of the important measures needed to restore confidence in the US dollar is for it to take the action needed to correct its balance of payments position, contain its inflationary spiral and rising prices involving action on both the domestic and international fronts. The internal problems that it faces from the Watergate and other investigations are possibly inescapable and have to work themselves out but on the economic front action is needed now. And then there is the huge Euro currency problem which was at the start of the year estimated at $80 billion but is now thought to be of the order of $100 billion to $110 billion. On this the effort being made by the US to repatriate the funds through higher interest rates and relaxed regulations must be supplemented by an international agreement among the Western European countries to fund this huge stock and regulate it. What part the hot money of the oil rich Arab States is playing in the speculative attack on the dollar and the rush for gold and German franc as a result of the continuing tension in West Asia is difficult to estimate but it is a factor to be reckoned. There is also the question of the Euro-bond issue with falling Euro-bond prices and rising yields (touching 8.36 per cent in mid May). And finally the current Jerry built structure of the joint float, the industrial floats, the devaluations and revaluations must be replaced by a long term reformed international monetary structure with international liquidity under real international control. For India with one third of its trade in the sterling area, the sterling link is the arrangement indicated by its economic interests and its system of multitudinous controls makes any system of an independent float not workable. But this crisis situation might also be an occasion when a gold policy might be included among the policy instruments being formulated for the Fifth Plan. We have a huge stock of gold—much more than what is economically or socially needed. The 1958 RBI and ISI estimates of privately held gold were around 105 million ounces to which should be added the RBI stock of 7 million ounces now increased, through taking over our annual production of around 1,50,000 ounces to around 10 million ounces and a further 25 million ounces smuggled into the country at the rate of 1.8 million ounces a year. Thus our total stock is around 140 million ounces of which 130 million ounces are in private hands which at current gold prices is valued at Rs. 12,325 crores—very near half of our GNP. The Fifth Plan gold policy should aim at stopping the diversion of savings into gold and for this the two essentials are a relatively stable price level and growing investment opportunities specially for the rural people—through more UTIs, decentralised LCIs, the investment opportunities offered by the rural branches of the nationalised banks.

The next round of trade negotiations GATT and member countries and some important non-members like the Soviet

Union are getting ready for a new round of trade agreement negotiations. The last round in 1967—the Kennedy round—reduced trade barriers by 35 per cent and increased world trade by 100 per cent. The US President is seeking similar authorisation from US Congress to negotiate a new round of trade accords. The international climate is ripe for it. The evidence of the harm done by existing tariff and non-tariff barriers to the trade and development of the third world which is 3/4 of the world's people—has now been sufficiently clarified. In fact the US delegate at the May UNCTAD session complained about the general Jeremiah tone of the UN report on the subject. It now remains for national policies and national interest to be so developed and argued that there can be a further 20-30 per cent reduction in trade barriers in the world. Similarly it is necessary in light of the parties concerned for EEC and India to use the current negotiations to negotiate and propose agreement as to the reduction of tariff, para-tariff and non-tariff barriers in the trade between India and the EEC countries.

Energy crisis: The United Nations and EEC reports on the State of energy use in the world and in Europe strike sombre notes. The UN reports that world consumption of energy increased by 63 per cent in the sixties at a rate of 5.8 per cent with growing use of petroleum and natural gas. There is uneven distribution of this energy use. The US with six per cent of the world's population consumes 33 per cent of the world's energy, with a per capita coal consumption of 11.1 tonnes compared to 1.9 tonnes by the rest of the world. Indian production of solid fuels increased from 56 million tonnes in 1961 to 74 million tonnes in 1970. The per capita solid fuel consumption of India increased from 128 kg in 1961 to 139 kg in 1970. While Europe consumed a little over 1/7 of world energy in 1970, the EEC report calls for early agreement among the countries on a comprehensive energy policy before "quite literally the lights go out over Europe". This could happen, it states, in 1980 with the OPEC bargaining position hardening. It calls for reducing Europe's dependence on imported petrol (which also will reduce the surplus dollar holdings of the oil basins) through extensive development of its certain (though costly) coal resources and offshore drilling. Meanwhile Japan's policy of directly importing its oil needs and not being in the grip of international oil monopolies is commended as policy for European countries. That also is the policy that we have begun following but which should be pursued more actively.

ADB: The Asian Development Bank (see Vol. III page 254) is constituting an Asian Development Fund of $525 million to provide its member countries with IDA type soft loans. Japan has pledged 1/3 of this fund as its contribution, the US another third, with India and other Asian countries contributing the balance third. India's contribution to the Bank's capital is $ 230 million and it is pushing for the speedy operation of the soft loan fund. Meanwhile its own resources should be made freely available to the member countries of the Bank in limiting up their infrastructure and industry.

Jute international: An international body, Jute International, is being set up by India, Bangla Desh, Thailand and Nepal who between them produce two third of the world's jute. The Datla meeting of the four countries has established the headquarters of the body in Delhi. Its major mandate is to promote the jute trade and help face the growing

competition from synthetics in the world market.

World Youth: The UN report on youth points to a quantitative and qualitative dimension. By 1980 the world's under 24 population will be 2.4 billion or 55 per cent of world population, with more than 60 per cent of them in developing countries. In a recent lecture in the US, the Ambassador of the US in India attributed the troubles of the sixties to the one time bulge of this section of the population—between 17-20. The UN report pointing to the 3/4 of the world's people earning only 10 per cent of world income, points to the same impact of poverty and unemployment in the youth in the developing countries to the point where many of them are questioning whether the present social system and its values can provide a basis for a just society. Education is caught in this grind and represents an increasing area of irrelevance and frustration to young people. Alongside of growing youth unemployment, there is also the poor diets which fall short of the energy requirements of youth by 30 to 40 per cent. Among proposed action programmes are: including youth needs and satisfaction in plan priorities; break the injustice barrier between the small number of rich youth and the poor youth majority; reform of education and development of voluntary services for youth; increase in employment opportunities and caloric intake by youth. In other words, the youth demand is also the people's demand—a fast developing society with more equitable distribution of wealth and income—a more productive and a more just society.

* * * * * *

II. Agricultural Development

Rice and rice wholesale takeover :

The 1973-74 target of 59 lakh tonnes of rice (see last issue page 342) calls for a planned and intensive kharif (samba) programme which should be an extension of the Rs. 649 lakhs emergency (Navarai) rabi programme under which 10,000 pumpsets were energised, diesel generating sets and power sprayers provided. For the samba kharif season the main effort should be to increase the yield per acre of HYV rather than expanding the cultivating area. In the past season, in the Thenmanadu village the Karuna yield was 3,420 kg per acre, in Achuthamangalam 3,338 kg per acre, with Ponni paddy in Neduntheru and Kurichi yielding 1,317 kg and 2,104 kg per acre. About half the 55 lakh acres under HYV use CO-25, CO-29 and ADT-27 with an average low yield of 800kg per acre. These should be replaced by IR-8, IR-20, Karuna, Kanchi, Kali and Ponni and the result will be the attainment of the target. A second part of increased rice production strategy is for increased application of fertilisers by about 30 to 40 per cent over the 25 to 30 kg of nitrogen per acre. The State Government's request to the Union Government for 2.74 lakh tonnes for the Kuruvai season will meet this need. In this connection the latest developments

in the split application of nitrogen particularly in the Navarai sowings, both to increase the yield and increase the grain to straw ratio needs to be popularised by the extension officers. To this should be added the pest control measures and sprayers acquired during the crash Navarai programme. In view of dispensing with actual spraying, (see Vol. II No. 6 pages 21 and 22 and No. 7 page 19), the planned use of the 4,500 power sprayers and the adequate distribution of the requisite pesticides are essential inputs in the kharif programme. For all this the field extension workers with the help of the department's research officers and the Tamil Nadu Agricultural University should be helped to keep up to date with the latest techniques and means of diffusion. In addition a special effort is needed this year to ensure that the farmers are motivated for the samba season. Irrigation water from June must be released in sufficient amounts, prior to the onset of the monsoon. Because of the power situation, this year, 2,500 cusecs have been drawn daily for power generation and the water releases in June and July for irrigation purposes must be ensured. This is the first motivational requirement. A second problem that must be faced is marketing. In order to secure an adequate price, the farmer is having to hold the paddy which small and medium farmers are unable to do, particularly in Thanjavur. Here the speedy construction of roads linking the villages to markets increase in the number of cooperative marketing societies and increase in the FCI and State Civil Supplies department agents are necessary to provide the farmer with the price incentive. In this the marketing plan for the State is outlined in the next section. A further problem that must be met is his demand for credit. In spite of the increase of cooperative credit societies from 182 to 573, with a five fold increase of membership from 76,000 to 3.9 lakhs and a similar increase of credit from Rs. 14 lakhs to Rs. 6 crores in the last 15 years, the societies have not kept pace with the rate at which HYV and IADP areas have spread in terms of banking functions, management skills and farmers confidence, (see Vol. I No. 7 pages 2-7). This is in part the reality behind the complaints of the Tamil Nadu Agriculturists Action Committee. An increase in the number of societies and in the number of village level workers who at present have to cover 6-7 villages but who can serve no more than 300 farmers is also a need that must be met for the Kuruvai season.

The takeover of the wholesale trade in rice in the State is under study. The State is a party to the All India decision for the takeover. The Chakravarty Committee is at work on the details of the takeover which in the case of rice includes takeover of wholesale dealing as well as rice mills with licensing of millers. The takeover of the wholesale trade in rice is simpler and more complex than that of wheat. It is simpler because most of the paddy must pass through the rice mill from where a levy can be made. It is complex because the number of points of leakages is doubled—the farmer and the miller. In many cases the two are the same. What stocks are each allowed to hold? How are these stocks to be checked? Both FCI and the State Civil Supplies Corporation have built up a good deal of experience in procurement operations which must be expanded but even so a successful replacement of the wholesalers completely must be carefully planned to avoid the trend of confused distribution situation of wheat in the deficit States (see Vol. III page 243). As one means of ensuring a successful takeover operation, the State Government has asked the Agricultural Prices Commission and the Union Government to raise the procurement price of rice by

Rs. 4 per quintal from Rs. 47 to Rs. 51 for coarse variety from Rs. 56 to 60 for superfine varieties. This price rise is needed even for meeting the 1972-73 procurement target of 2,50,000 tonnes which upto November 1972 had reached only 10,000 tonnes. The present difference between procurement and market prices must be narrowed to create conditions for successful takeover. Tamil Nadu supplied in May 10,000 tonnes of rice to Maharashtra to meet its hardship conditions and a similar amount to Kerala over and above its contribution to the Central pool.

The wheat takeover has not involved this State except in regard to some distribution aspects. In order to eliminate black market resales ensure that good quality and cleaned wheat is available to consumers and save on the high grinding charges, the Government from May replaced the issue of wheat to consumers by wheat flour and sooji. The 14 Government fair price shops, 100 consumer's cooperatives and all licensed food grain dealers now issue 5 kg of wheat flour at Rs. 1 per kg, 2 in the below Rs. 300 income group and 3 kg of maida, 3 kg of sooji and 5 kg of wheat flour per month to the others. The accumulated stocks of wheat bran are also being issued to cattle owners at the rate of 2.5 kg per adult animal and 1.5 kg per calf per day to avoid black market resales. The wheat distribution is functioning smoothly in the State where its use is somewhat marginal.

Marketing Plan:

The marketing bottleneck in the State referred to in the earlier section on rice and paddy applies generally to the disposal of all agricultural crops as well as under animal husbandry. In view of its importance, the Government has established a comprehensive Rs. 36.44 crores plan for the integrated development of 106 regulated markets in the following pattern by districts: 53 major markets distributed in Chingleput (11), South Arcot (17), North Arcot (17), Salem (9), Dharmapuri (10), Coimbatore (20), Tiruchirapalli (14), Thanjavur (23), Madurai (12), Ramanathapuram (27), Tirunelveli (12), Nilgiris (1), Kanyakumari (4), 53 minor markets which will be accessible to producers who now have to walk 10–18 kms to the nearest market and also avoid congesting the major markets. The cost-benefit aspect of this programme is significant. The current 127 regulated markets handle Rs. 34 crores worth of produce. The marketing plan will be handling nearly twenty times that value at over Rs. 600 crores and will realise in licenses and fees alone Rs. 13 crores annually. The *Rs. 36.44 crores outlay breaks up into* Rs. 23.67 crores for the regulated markets, Rs. 6.16 crores for transport facilities, Rs. 0.26 crores for processing units, Rs. 6.26 crores for development of fruits and vegetables regulated markets, Rs. 0.09 crores for livestock markets and Rs. 6 crores for feeder roads and link roads to the regulated markets. In a sense the regulated markets for fruits and vegetables are even more urgent because of their perishable nature. The markets will have to handle a greater part of the 7.18 lakh tonnes of fruits and 13.4 lakh tonnes of vegetables annually. The vegetable market centres will be Kancheepuram, Cuddalore, Vellore, Tiruvannamalai, Coimbatore, Pollachi, Tiruchi, Manapparai, Thanjavur, Kumbakonam, Tirunelveli, Tuticorin, Vadseri, Madurai, Dindigul, Virudhunagar in each of which 950 tonnes cold storage plant will be installed. Of the 500 cattle markets in the State serving a total livestock population of 245.7 lakhs and of 112.3 lakhs, five markets in North Arcot and Tiruchi districts have been selected for further development as Polsathyamangalam, Kalasapakkam, Chen-

gam, Cheyyar and Manapparai. In each of the markets, cattle sheds, drinking water facilities, shops, rest sheds will be built on land provided by the panchayat union or panchayat. The total marketing plan will be handling Rs. 670·700 crores worth of products and the devices benefit to the producer is estimated to be of the order of Rs. 150 crores annually. This plan will make a very significant contribution to agricultural progress in the State and will be of material and immediate benefit to the small and medium producer and animal husbandry farmer. Now if rural finance and credit availabilities could also be ensured, rural development in the State will receive a spurt. The marketing plan outlay of Rs. 36.44 crores is being requested as a loan from the World Bank through the Agricultural Refinance Corporation and will be repaid within a period of 15 years. Such is its viability.

Research and Development:

With the opening of the seed technology department in the Tamil Nadu Agricultural University, the prospects for increasing good quality, high yielding, pest resistant and free seeds in the State has increased. Farmers in the State use 5 lakh tonnes of seeds, much of it below quality and 20 per cent of it not germinating. What is needed is about 30,000 tonnes of nucleus, 1.2 lakh tonnes of foundation seed and 5 lakh tonnes of certified seeds for the State. This provision will increase agricultural yield by 20 per cent and farm incomes by Rs. 100 crores. Through the newly opened department, the known technology of gamma irradiation can be used to produce newer crop varieties through mutation breeding and urgently needed research on techniques for isolating and removing viruses from the seed without affecting its viability undertaken. With the growth of HYV, pests have also grown and so this anti-pest research is urgent. The department can also become the focus for training the manpower required for extension, research and teaching involved in seed development and use and help the national and State Seed Development Corporations. In this connection the department has developed, with the approval of the State Planning Commission, a project for setting up a State Seed Corporation calling for an outlay of Rs. 24 crores for meeting the need for quality seeds in the State. The Corporation will pay off its investment in the course of 4 years as its net income will be Rs. 7.5 crores per annum. Another R & D programme is the development of cotton strains with higher yields and good commercial quality. The Tamil Nadu Agricultural University's research in cotton has yielded good results (see Vol. III No. 2 page 109). Five schemes are under way to develop strains with high medium staple up to one inch and capable of spinning up to 40s along with resistance to ball worms. The Reba B-50 with its high yield (up to 13.2 quintals per acre) and resistant to black arm and the K 3400 which is a 120 day yielder of 7.4 quintals per acre that have been successfully developed in Andhra Pradesh can also be grown in this State. A further research result is the possibility of inter-crops in sugar cane cultivation with its long yield period of over a year requires relief to the small and medium cane growers. One inter-crop can now be tried by sugar cane growers—the 60-70 day green gram which can be grown at 25,000 plants per acre of cane provided pest control measures are taken against the caterpillar and other insects which it attracts at a small cost of Rs. 45 per acre. This would also help to relieve the serious pulse shortage in the State which produces 2.5 lakh tonnes against an annual consumption of 8 lakh tonnes. In the area of agricultural engineering, the Aduthurai Centre has demon-

strated the effectiveness of the Mitsubishi power tiller for preparatory cultivation of the maize crop specially in sandy soils. It is worked with diesel and is a one man operation covering 2½ acres per day, replacing the work and maintenance cost of six pairs of bulls. It can be attached to power sprayers or pumpsets and can be used for any type of agricultural machinery such as the chaff cutter, maize and paddy thresher, acting as handy tool for a small farmer Another development is the Rs. 67 lakh small farmers agency set up under the Indo-German Nilgiris project, using the sale proceeds of its 12,000 tonnes of ammonium sulphate. The agency is helping small farmers in subsidising the cost of treating their potato fields under the Nematode pest control programme (see Vol. II No. 1 page 6), constructing a road linking the farmers to the Kiloktagiri Cooperative, building check dams in Gudulur taluk and developing vegetable and fruit cultivation in the Nilgiris. This programme is being further expanded under the Nilgiris district Fifth Plan.

Rubber :

In the last issue, reference was made to the proposal to export 10,000 tonnes of rubber at a loss to the Country (see page 335). Rubber production in this State and the Country is growing at a normal rate but the stock situation for last year is disturbing. In 1972 the total natural rubber production was 1,09,127 tonnes and of all rubbers was 1,51,577 tonnes. The stock position at December 1972 was that 55,971 tonnes of natural rubber and 15,890 tonnes of synthetic and reclaimed rubber was being held, with increases in the hands of dealers (nearly 5,000 tonnes) and manufacturers (nearly 4,000 tonnes) while the stocks in the estates actually declined by over 1,300 tonnes. Our rubber produced in this State and other Southern States is not internationally competitive. The Indian price is Rs. 5,000 per tonne for Grade I rubber while the international price is Rs. 2,000. The Indian demand is increasing but rather slowly because the rubber content in a manufactured tyre is only 15 per cent. Even so manufacturers prefer imported rubber because of the price differential. And this explains why there was in 1972 for example, the import of 6,598 tonnes, includings 348 tonnes of natural rubber. And so we are in the curious position of importing rubber and a demand for exports at thesame time. If there are to be exports, rubber producers will have to be content with a 50 per cent cut in their price, or in the alternative the Government will have to subsidise the difference. Neither is necessary. The first task is to bring supply into line with the demand and this should be the task of the Tariff Commission or a special committee set up for this purpose.

Coffee :

As noted in the last issue (page 346), coffee production is increasing and exports expanding. The exports value has been climbing steadily from Rs. 31.40 crores in 1971-72 to Rs. 35.695 crores in 1972-73 and for this year the exports are likely to be Rs. 50 crores. There are two disturbing elements in this situation. First the consuming countries have taken advantage of the differences among the producing countries of Latin America, Africa and Asia to scrap the ICO agreement, agreeing to its extension for 2 years till September 1975 with all its regulating mechanisms dropped. The ICO is acting as a statistical centre for the exchange of information in coffee production and sales and for the issue of stamps for export. Negotiations for a new agreement are under way and it is hoped that India's quota needs will be adequately taken into account. India's

exports being 1 per cent of the total coffee exports, India's position in the organisation, is not a strong one. ICO operates two development programmes—the diversification fund and the promotion fund. India has programmes under way in the former group and plans to expand them further. The other problem is the familiar one of the Indian Coffee price being well above the international price. The high prices ruling internationally last year and this year due to damage to the Brazilian crop will not be sustained. The two actions that this calls for is increase of the domestic consumption of coffee and reduction of the high cost structure of the industry.

Tea :

The 1972 export of tea of 207.44 million kg referred to in the last issue (page 347) has meant a foreign exchange earning of Rs. 160 crores. Our stakes in this industry are high and the declining export trends, particularly in free currency areas are worrisome. This decline is due to operation of bilateral trade agreements, rising costs, better competitive conditions of tea from Sri Lanka and Africa and increasing domestic demand. Under these conditions the continual renewal of tea plantations and their improved and effective management are essential. The nationalisation of tea estates currently under study by the Government panel should look into the ways and means of renovation of tea estates and modernising their management. It will also have to lay down a long term policy with regard to nationalisation of the estates and a short term policy with regard to the sick estates. There are at present 50 sick estates out of a total of 12,000—West Bengal has six closed gardens and Assam 10. Both States have drafted bills to take over these sick gardens but under the Industries Development Act do not have the power to do. Only the Union Government is empowered to take over sick units. Instead of going through the elaborate procedure of the take over of sick textile units, the present Act could be amended to enable the States to take over the closed estates. For this State there are two other issues. The first is with regard to the 75 per cent power cut and the slightly ameliorative arrangements made by the Government to meet the May-June needs of the factories. This has not really helped as explained in the last issue (page 349). Now it is the monsoons which will save the factories and those are eagerly awaited. The other problem is the housing of tea estate labourers which in this State and region has had a long history and has been under discussion since 1945 In 1950 the third session of the Industrial Committee on Plantations drew up a comprehensive 12 year plan for housing plantation labourers which was embodied in the Plantation Labour Act for providing standard houses for the labourers and upgrading substandard houses. In 1956 the Union Government introduced a housing loan scheme through the State Governments which remained unoperative because of the financial burden and cumbersome procedures. Hence on the recommendations in 1964 of a working group on housing for a 50 per cent loan and 37½ per cent subsidy for plantation labour housing construction, the Union Government accepted the scheme in 1967 and this State framed rules for its operation the very next year. Even so the procedural bottlenecks and the securities and bank guarantees required have made its operation in the State rather slow. The estates have gone ahead with improved housing plans and their request that Government make available the subsidy part—because of the interminable delays in the loan arrangements—seems justified. If the subsidy is granted the housing programme can be completed.

Dairy farming:

As suggested in Vol. III page 259, the Tamil Nadu Dairy Development Corporation under operation has launched a Rs. 9 crores expansion programme. The new 2 lakh litres a day dairy at Ambattur has been set up. The milk powder plant with ten metric tonnes of skim powder is also set up at Madurai. The Erode dairy is being expanded to 60,000 litres and a new 60,000 litres dairy at Jalarpet along with a number of collecting centres are being established. Madras city's milk requirements of 3.5 lakh litres are being met to the extent of 1/3 from the one lakh litres dairy at Madhavaram, the Erode pasteurising plant of 30,000 litres per day, the 20,000 litres Nilgiris plant which sends Madras 12,000 litres and the 20,000 litres of the Vellore plant which also sends Madras 12,000 litres. It is hoped that the Corporation's scheme for aid to small and medium farmers to keep 10 cross bred cows producing 10 litres of milk a day through 1,000 farmers around Madras (within a range of 80 kms) will increase the milk yield by 1 lakh litres a day. One gap in this programme that needs to be filled is to extend to the Dharmapuri Farming Community the excellent results of the Hosur cattle farm which won 29 prizes in the South India Cattle show, the supreme champion prize and 22 prizes in the cattle show at Madurai in April. The excellent breeding and milch results are not being spread to the farms around. And there is heavy demand for milk and milk products both in Madras and in the growing metropolis of Bangalore. Also Hosur could be a site for research in combating milch cow ailments following from lack of micro-nutrients like zinc and manganese. The District Plan provides for an extension of the Hosur dairy farm work to the entire district and this project should now be implemented by the corporation as a priority.

* * * * * *

III. Industrial Development

Salem and Southern Steel

The technology for making special steel and stainless steel at Salem on the basis of the visiting mission's report (see Vol. II No. 7 page 23) and further work done by specialists in Bombay and Jamshedpur has been now established. On this basis the equipment is being ordered and it is expected that with this advanced action, the first phase of the plant will be completed by 1976. The building work has begun, and the railway facilities are being constructed within the building and infrastructure budget of Rs. 65 lakhs for this year. Similar preliminary work has begun with regard to the Vijayanagaram and Vishakapatnam steel, though a final decision is yet to be taken on their capacity and productivity. At Vijayanagar 1,800 hectares out of 2,400 hectares needed for the plant have been acquired at a cost of Rs. 65 lakhs. In Vishakapatnam, the Government has given notice of its acquisition needs and acquisition proceedings are under way. The survey of India has completed topographical surveys of

the two sites and Hindustan Construction completed the soil investigation. The railways have also made their surveys for exchange yards and sidings. Similarly NMC Jamshedpur, and German and Soviet facilities are being used to test the iron ore, limestone and dolomite found at Donimalai and other places. Now further work depends on the decision as to the scale and product mix of the two plants which economies of scale point in the direction of 2 million tonnes each, with some specialisation.

Neyveli and Kalpakkam :

In accordance with the analysis of Neyveli and its restructuration in the last issue (page 348), the Union Government decided to invest in Neyveli an additional Rs. 11.62 crores for the purchase of mining equipment so that its production of lignite is increased to 4.5 million tonnes per year and so reverse the declining production which was 3.04 million tonnes in 1971 and 2.33 million tonnes in 1972. The low production has meant idle capacity in the power and briquetting plants and low fertiliser production. The 4.5 million tonnes will be reached by 1975-76 and then the next stage of producing 6.5 million tonnes can be taken up. This expansion schedule must be adhered to because of the critical power position of the State not only this year but what is even more disturbing for the entire Fifth Plan—when estimates indicate a general 25 per cent shortfall (see Vol. III page 3), Kalpakkam will provide some relief towards the end of the second year of the Fifth Plan and in the last year as the first unit will attain criticality in 1976, and the second unit in 1978. A few months after this stage is reached, each unit will be able to provide power to the Tamil Nadu and southern regional grid.

Ambattur :

The current power shortage has seriously affected the Ambattur industrial estate in April and May. The estate has an investment of Rs. 20 crores, an annual production of Rs. 30 crores goods and employs 10,000 workers with a wage bill of Rs. 3 crores. In addition a number of unemployed engineers with bank loans have established going units in the small sheds in the estate. All the units in the estate have suffered serious interruption in production with the power shedding and the cutting of the 25 to 30 units of electric power per week allotted to them. The Government is concerned about the situation in the industrial estates in the State which number 26 and whose power consumption is only half a million units per day. It is hoped that the Government decision to provide these units the needed power will be quickly translated into supply by the Electricity Board, given the number of workers involved and the importance of the production of the estates. The concessional finance made available to unemployed engineers for setting up and operating industrial units will receive a further fillip from the request of the State Bank of India to the Reserve Bank to approve giving unemployed engineers the same financial aid including lowering the interest rate from 8.5 per cent to 6 per cent. In this connection the Bank has proposed that it extend financal assistance for equity capital for young entrepreneurs who are already in business and also support non-technical graduates, B,As., B.Scs. and B.Coms. who wish to start new industries. This is sound because the problem of educated unemployment weighs more heavily on the non-technical graduates. The Tiruchirapalli District Small Industries survey undertaken by the Small Industries Service Institute of the Union Ministry of Industrial Development points to feasible

industries which can be developed in this district which is one of the eight backward districts in the State. Medium industries which can be established now include one more sugar mill, a paper manufacturing unit with the large bagasse available using diesel as fuel, servo motors production of which BHEL requires Rs. 10 lakhs worth a year, a unit to fabricate flexible couplings, seamless steel tubes unit against requirements by BHEL alone to the tune of Rs. 2.15 crores annually, and plants which can produce steel sheets, plates and rolled sections which BHEL needs up to Rs. 1.68 crores per year. In the small sector the agro based industries for the district are mechanised coir at Kulitalai, coconut shell powder for plastics, oleo resins from chillies, cashew processing, solvent extraction of oil from rice bran and groundnut cake, straw board, bananas processing, dehydration of onions, glucose from maize. The mineral based industries appropriate to the district proposed are a plaster of paris unit near Ariyalur, a modern lime kiln at Karur and a quratz crushing plant at Manapparai. Other demand based industries are plants for producing BHC, DDT, endrine pharmaceuticals, aluminium hardware, table moulded bricks, fabrication stop, finished leather, glass products and electronic components. All these units set up in Tirumayam, Alangudi and Kulathur taluks are entitled to the Union Government subsidy of 1/10 of the fixed capital and for those set up in Lalgudi, Udayarpalayam, and Tirumayam taluks concessions in power tariffs are being offered. Even more important for all these industries to function adequately is the continuous supply of power which the Electricity Board can and must arrange. The financial subsidies are to be increased from 10 to 15 per cent and the ceiling limit for outright grants to new industries or expansion of industries set up in these backward areas increased from Rs. 5 lakhs to 10 lakhs. The Union Government in May added 17 more taluks in the districts of Dharmapuri, Madurai and North Arcot to the backward areas list making a total of 22 taluks in these districts which are eligible for concessional finance for industries set up there.

Golden Rock :

The railway diesel shop at Golden Rock (see Vol. II No. 2 page 11) Tiruchi, in May turned out its 100 diesel locomotives after overhauling. It acts as the overhauler to the railway all over the Country, has produced a number of small parts and components saving over Rs. 5 lakhs in foreign exchange and is helping to set up similar sheds in other parts of the Country. On the basis of this record, the railway board should establish its second factory at Golden Rock, (the other one being in Varanasi) to produce diesel locomotives. There are all advantages from a skilled labour force and other external financial economies that would flow from such a Golden Rock location.

Pharmaceuticals and Bricks :

One of the industries recommended in the Tiruchi survey referred to earlier—a plant for producing drugs and pesticides—is coming into existence in Madras with the decision of TIDCO to take over Dadha Drugs and Pharmaceuticals and run it as a joint sector project with financing by the State Government and the term lending institutions. The joint sector firm will be filling an important gap in the State's industrial structure. It will produce Rs. 2.5 crores worth of anti-biotics, sulpha drugs, vitamins, fungicides, anabolics and other drugs. The management of the joint sector plant will be in the hands of the private sector while the chairman of the Board of Directors will be a Govern-

ment nominee. The State Planning Commission's Task Force on Health (see Vol. II No. 9 page 32) recommended the setting up of several units for the manufacture of drugs to meet the increasing demand in the State and with this unit the State will be continuing the development of the pharmaceutical industry in the State and the Country. Further with this project, TIDCO will have Union Government's clearance for the largest number of joint sector projects taken on by any State. It shares with Punjab the clearance for 17 such projects. Andhra has 12 such projects. Gujarat two and Maharashtra one. Another important development is that the Indian Standards Institute has helped the State brick manufacturers and users to agree to change over from 1 April, 1975 from the traditional bricks to modular bricks based on metric measures. This means that from 1975 the building industry in the State will be using bricks measuring 20 cm x 10 cm x 10 cm. This will help brick manufacturers with standardised demand, speed up building construction which can from now be planned on these standards.

Leather:

Further to the booming export trade in leather and rise in international prices during the last two years reviewed in the last issue of the Bulletin (page 353) from April international leather prices began declining—to some extent a corollary to the previous two year boom. Local leather prices have been declining in the Madras hides and skins market, with very little business being done. In April there was no leather export at all. On top of all this the trade is awaiting the export quota announcement as from April 1 referred to in the last issue. It is a matter of regret that this sector which involves many small units and is a major foreign exchange earner should continue to face internal uncertainties at this time of slackening international demand. It is urgent that the Union Government speed up the establishment of the export promotion council and activise its promotional pro-programme in this State which is responsible for processing 80 per cent of the leather exports from the Country.

Yarn:

The yarn crisis analysed in the last issue of the Bulletin (page 349) continued through May and June. On May 1 the textile commissioner finalised the allottment of cotton yarn to the States at the rate of 0.18 kg per loom per day for 25 days in a month for handlooms and 0.9 kg per loom per day for 25 days in a month for power looms. This is about 75 per cent of what they need if they worked on a single shift for 25 days in a month which would be 0.25 kg per day for a handloom and 1.2 kg per day for power loom. But in reality the looms work at least on 2 shifts and for more than 25 days so that the allotments are about 1/3 of what the looms really require. For this State this allotment is totally inadequate. Its monthly needs are 40,000 bales, and the allotment is about 25 per cent of that. And the distribution continues to be mixed up. Under the distribution system in operation, this State which is a major supplier of yarn to other States is now required to export its yarn to them and import yarn from other States. In the first allotment of 11,965 bales of yarn to the State, 7,681 bales were from the mills in the State and the balance from mills in other States. And then there is the problem of the yarn alloted to other States from Tamil Nadu mills accumulating to the extent of 4,000 bales per month because the other States have not lifted their quota. Further the 3 lakh handloom weavers in the State are not able to get the higher counts yarn they need and

are closing down and suffering intense hardship. The Government has made available Re. 1 crore as loans to 1 lakh of them to tide over the crisis. Another aspect of the crisis is that the export of yarn stopped in April and May. The Union Government's decision as reported in the last two issues, was to stagger the exports. But from March 13, when the yarn control scheme was announced, export orders have not received clearance and by early May Rs. 6-8 crores of yarn ready for export is awaiting clearance. The export channel is being used by some mills to change their production pattern and supply the export houses with yarn while the internal market is facing severe shortages. Finally the price of yarn has ceased to have any uniformity and is subject to manipulation and fluctuation. The real cure for this whole mess is for the power supply to the mills to be resumed in full and it is only after the monsoons that these messy and badly planned controls and their non-execution can be done away with. In the meanwhile the distribution system at least can be rationalised, prices fixed according to counts and the committed export orders cleared.

Private sector reports:

The annual report of Kamani Engineering Corporation records a higher profit at Rs. 49.87 lakhs compared to that of the previous year and a higher level of export turn over (Rs. 7.39 crores). The company is undertaking for various State Governments the installation of power lines, is associated with the feasibility studies for underground electric railway for Madras and is making available its engineering and technical services to other requesting firms and plants in the Country. Its role and activities become important as effective action is taken to meet the power shortage in the State and the Country. The annual report of the Indian Aluminium Company shows a good performance despite the 15 per cent reduced metal production due to the power cut and labour unrest. Its metal production for 1972 stands at 39,187 tonnes and sales at Rs. 44 crores. With the license to increase its Belgaum Smelter to 60,000 tonnes per annum and its request to the Government to expand its fabricating facilities at a total cost of Rs. 20 crores, there will be a 25 per cent increased production in the future. One of the problems that this and other aluminium industries face is the power cost which is a high proportion of the total cost. The Electricity Board in this State and other States wish to renegotiate the tariff to bring it more into line with what other consumers pay. For this power intensive industry the norms for fixing the power tariff should be fixed by agreement among the Boards so that there is a uniform all India policy. The demand for aluminium is expected to double from the present 2,50,000 tonnes to 5,00,000 tonnes by the end of the Fifth Plan and to meet this demand the capacities, the technologies and the working programmes of all the plants need to be reviewed and brought in line with the expected demand The Union Government's newly established Bharat Aluminium Company with capacity of 1,50,000 tonnes will, it hoped, be a pace setter in this regard.

* * * * * *

IV. Education Science and Health

Unrest in educational institutions :

May recorded continuing unrest and some serious violence in universities and educational institutions. Upto the third week of May, disruptions in 12 groups of educational institutions were recorded. The most serious was in Lucknow University where following the disturbances reported in the last issue (page 355), the teachers on May 7 demanded that the police and the Provincial Armed Constabulary (PAC) be deployed in the University in order to provide them with security while invigilating the examinations and when this was not provided demanded the resignation of the Vice-Chancellor and "did not check any examinee from copying for fear of being beaten up or manhandled". The students on the other hand opposed the stationing of police and PAC. In the second week the vice-chancellor brought in the police and PAC and when this resulted in continuing violent activities in the university, arranged for their withdrawal on May 21. Meanwhile discontent among some of the police and PAC grew over their service conditions and there was a merging of the university and police discontent which fanned by the usual anti-social elements led to the burning down of four main buildings, the administrative block, the psychology block, the Art Faculty and the cashier's office, involving the complete destruction of the buildings and the records of the Arts Faculty, the proctor's office, the cashier's office and university examinations. The army was moved into the university on the 21st and on the following day a more general revolt by the PAC had to be put down in the State. Examinations were the cause or occasion for violence and closure of the institutions in Samastipur College in North Bihar where students walked out of the examination hall because they felt that the questions were stiff, followed by violence and police opened fire in Kashmir university, in Allahabad University and the Punjabi University. The Aligarh Muslim University disturbance continues with the Executive Council rusticating some of the student leaders and they in turn demanding the resigna- tion of the vice-chancellor. The Delhi University student unions in 17 college are reviving the agitation against the rustication orders on 4 students. In Kerala the ministerial staff federation of the private colleges boycotted the Calicut University examinations in order to better their service conditions and a similar demand has been made by the Delhi Post-Graduate teachers association. West Bengal closed all six universities and collegs on May 7 following a strike call by the student wing of the Congress. A student-police clash occured in Vijayawada when students orgranised demonstrations for a separate Andhra State. All educational institutions were closed in Srinagar following police opening fire on violent demonstrators organised against a London publication—the Book of Knowledge—which has since been banned in that State and the Country. The Jadavpur University disturbances centred around the demand of the students for the suspension of 2 teachers. Further trouble is abuilding by the agitation started by 2 political parties against the Punjab and Haryana Governments's decision for a small rise in college fees – a measure which all the States and colleges need to undertake. Against this background the need to reform the educational system including the examination system and improve certain regulations against the intervention of outside elements including political parties becomes urgent.

Educational Reform :

The need for out-of-school or non-formal education as an integral part of the education system and the importance of merging the two so that there is a single system of education set forth by the State Planning Commission's Task Force on Education, Science and Technology is now established by the Central Advisory Board of Education. The existing school system cannot meet the demand for education by the Country's exploding population, the specificity of each group or area cannot be met by the uniform school system, the development of science and knowledge cannot be accomodated in the formal system, the dropouts from the system should be provided with education. Formal education divides people into educated and uneducated and above all is becoming prohibitively expensive. But the case for out-of-school education is positive-the need for continuing education, the opportunity for education which every part of life offers and the willingness of so many to participate in education. So continuing out-of-school education is not something meant for the lower classes, not only for drop-outs and not the result of zeal and goodwill. Its clientele include those who have not had schooling, those who have dropped out, those who wish to continue education, workers who wish to improve their education, workers who wish to improve their professional skill, educated unemployed who need retraining, those who need refresher training which include all persons and people who want more education for its own sake. There are multiple agents for such education—schools, colleges, HYV, SFDA, Co-operatives, youth movements, voluntary bodies, radio and TV and its implementation and it must be expressed in the programme of pre-school education, the multi-point entry system, extra curricular activities, literacy centres for youth and adults, functional education, manpower preparation and university continuing education action. The central point is the urgent need to develop in all ways possible this system of out-of-school or informal education. The State Government has taken the first step in launching such a programme. The programme organises evening classes for boys who have dropped out of school so that they are brought up to the level of SSLC through a practical 2 year course even while they are at work at the end of which they will get an Evening School Leaving Certificate (ESLC) entitling them to further training in ITIs or apprenticeship programmes. Simultaneously the utility of the course to the students and education department is to be evaluated. The course will start with 25 boys who have now the equivalent of 8 years of schooling and 50 boys who are below that and who will be prepared to enter the course. A detailed syllabus in Tamil, English, General Mathematics including Geometry and applied science, engineering drawing and citizenship has been established with the help of specialists in the International Institute of Tamil Studies, the British Council, the Association of Mathematics Teachers of India and the Technical Teachers Training Institute. The course will cost Rs 16,000 in non-recurring expenditures and Rs. 78,000 in recurring expenditures or Rs. 45,000 for the first year and Rs. 48,000 for the second year. This is an important start by one of the Madras schools under the full support and guidance of the Department of Education and the community of scholars, in execution of the Task Force recommendation on out-of-school education. The Government is also taking over 10 municipal high schools because of the financial stringency of the local bodies which is, however, a move away from decentralised education for which the local bodies and parents are responsible.

Each educational district in the State is being provided with at least one mobile laboratory and coeducation in all PUC centres where there are no facilities for women's higher education is being urged.

Another programme to promote talent and compensate students from poor families is the 500 Union Government scholarships for this academic year under which this State will receive around 30 scholarships for students whose parental incomes are less than Rs. 500 a month and for scheduled castes and tribes students on the basis of merit shown in a competitive examination. This merit-cum-poverty scholarship criteria also recommended by the Task Force will be tenable for the duration of secondary education and will lower tuition fees, residential charges, books and stationery. A further innovation is the broadcasting in the school services from the next academic year of different aspects of sports and games from the Madras and Tiruchi AIR stations. Interviews with leading sportsmen and information talks and features will be broadcast. Radio english classes will be made simpler, more interesting and purposeful. Similarly TV programmes which will start in Madras next year will be heavily educational with little or no commercial television and what the Union Minister calls urban glamour shows. But for this there is need for intensive preparation of education programmes in the Department of education and training of teachers to use such programmes. Only such broad and purposeful educational use of the media will justify the massive outlay of Rs. 501 crores for radio and TV proposed in the Fifth Plan for the Country (see Vol. III pages 266 and 267). This revised plan will cover the entire population of the Country on medium wave, yuvavani service in 40 centres, TV mother stations in all State capitals with one relay transmitting station in each State and the provision of community view sets in all centres when TV transmitters are proposed. For Tamil Nadu, a relay centre at Villupuram to provide TV coverage to Pondicherry is included. Hence the State Government, the Department of Education and Educators must now prepare the curriculum for TV and train the teachers and other village leaders in the techniques of their use. Again in accordance with the recommendation of the Task Force, the State Department of Education has launched a State programme of inservice training of teachers both to update their knowledge, train them in use of the revised syllabus and prepare them for the change over to the 10 year school when the Government takes the decision. In this connection the Madhya Pradesh programme for the inservice training of 1,25,000 primary and middle school teachers over a 3 year period to train them in the revised and updated science syllabus had some interesting and useful pointers. Last year 22,000 teachers were trained in 2 semesters of six months each, the first semester involving 15 days teaching in a middle school training centre and followed by 20 correspondence lessons and the second semester involving alternate Sunday classes and 20 weeks in a higher secondary school. The initial teacher objection to the loss of the Sunday holiday died down in view of the utility of the course which is now being extended to more districts and will be completed next year with all 44 districts participating at a total cost of Rs. 2 crores. On the literacy front the National Front against illiteracy organised in early May in New Delhi in which Union and State Government ministers, members of parliament, vice-chancellors and voluntary agencies participated, further adds to the growing consensus that a determined literacy drive must be made during the Fifth Plan. The Task Force recommen-

dation for this State for such a drive containing advanced basic vocabulary of 600 words was noted. It was recommended that 2 per cent of the State and Union budget plus local body contributions, and legislative efforts by public and private firms to make their workers literate have been suggested. It was also recommended that the first year of the Fifth Plan be observed as literacy year when the massive drive should be launched. Whether or not all these recommendations will be accepted, the literacy programme as part of the programme for non-formal education must be undertaken in the Fifth Plan. The Unicef programme for supporting the last year of the Fourth Plan's integrated child care services will aid 75 blocks in the Country in the production of ready to eat foods for young children, the development of project communications support and the establishment of a national institute of child development as a prelude to its providing during the Fifth Plan a minimum package of services to children aged 0-6 and pregnant and nursing mothers through supplementary feeding, immunisation, annual check ups, referral services, non-formal education for rural women particularly in health, nutrition and home care of the child.

At the university level, the Madras University Employment Information Bureau is providing guidance to help in choosing a career and a one month course for those wishing to prepare themselves for entering public relations, store keeping, salesmanship and the book trade. This will supplement the academic training of the graduate and give him some practical skills for obtaining employment or developing self employment. Like last year when the Bureau found summer employment for 450 poor and deserving students, similar summer work opportunities in various survey, personnel, marketing and advertising jobs are being provided again not only to relieve their current financial stringency but make known some pre-vocational skills for their future employment. In this connection the warning of the Himachal Pradesh University vice-chancellor that education was in danger of becoming a tool of destruction unless education is reformed to meet effectively the employment needs of society which themselves must be rapidly expanded and there was a general consensus of parents, the public, governmental authority to let education develop in accordance with its vocation without external interference is timely. The Union Government has in hand new university institutions—open university which will use all the media of communication. An Act of Parliament is to be introduced to launch this multimedia national open university, so that it can enroll students by 1975. The committee headed by the vice-chancellor of the Jawaharlal Nehru University and this university is now finalising its report. With the agreed need to regulate if not stabilise the admission of full time students to universities in the Fifth Plan the access of all persons particularly the under-privileged social groups, areas, working persons including housewives, and technicians who went in for vocational streams can be met by the open university establishment. It will help at least one university in each State to develop correspondence education and increase the facilities for private study by throwing open all university examinations to private students. But even more its admission policy will be wide open so that all working persons who wish can be admitted to the University, whether or not they have the formal academic qualification. This will involve use of the radio on a large scale for instruction by the university and the establishment of local academic centres in existing selected

colleges and schools, where students of the open university can have access to libraries, laboratories, other learning aids and even personal guidance. When this university is launched, the Country will have taken a large step towards the educational reform proposals outlined in the Task Force Report for this State and by the Union Planning Commission's draft education plan referred to in the last issue (page 357).

Technical education:

The agricultural education programme in the State is under review by a panel headed by the Deputy Chairman of the State Planning Commission, the agriculture and education secretaries and the vice-chancellor of the Tamil Nadu Agricultural University on the occasion of the visit of the World Bank team to aid in there form and development of this sector of education. Agricultural education at all levels—agricultural schools, extension training centres, colleges and the university are being reviewed and their development planned. One proposal that is emanating is the starting of agricultural polytechnics or institutes (polytechnics here may be a wrong term), where drop-outs from the seventh or eighth standard may be taken on for a 3 year course in intensive agricultural training for self employment and a further 2 year course for employment as gram sevaks. The farmers' education centres would be adjuncts to these institutions. In addition full fledged agricultural polytechnics (post secondary) are also needed to provide extension agents and agricultural teachers for the comprehensive high schools. The Bank mission is also examining the possibility of aiding the Fisheries College proposed for the Fifth Plan. In the field of technical education, in addition to the Technological University established in Andhra Pradesh, Mysore has established a technical university with a post-graduate centre in Sandur near the Vijayanagar Steel Plant to which it will provide consultant service as well as ensure uniformity in technical education in the State. It is hoped that the Union authorities will enable this State to launch the Technological University recommended by the Task Force (see Vol. II No. 11 page 33) and approved by Government in time to start operation from the next academic year, which will be able to launch needed innovations in technical education. One such is the industrial entrepreneurship programme for training engineering graduates who desire to set up their own plants organised by the Allahabad regional engineering college. The college has set up an industrial estate within its campus to provide first hand experience and training to its students in opening and operating small industries. The success of small industries depends on their links with larger industries who are their product consumers and this also must be a part of the training in the new course. Another innovation is the replacement of the usual refrigeration, air-conditioning, internal combustion engine courses which all engineering institutions have by courses for the design, operation and servicing of machinery and equipment in small and agricultural industries. There is a crying demand for maintenance engineers to save the crores worth of equipment which is standing idle today for want of such service.

Science:

The CSIR programme for participating in the overall development of backward areas (see Vol. II No. 10 page 28 and 29) has started in Karimnagar district, Andhra Pradesh with all round programme for the development of agriculture, industries, roads, housing, public health and mapping

and using water and mineral resources of the district. A multi-disciplinary team is undertaking the survey of natural, mineral, animal, forest and other resources and on this basis is preparing feasibility reports on the type of industrial units, appropriate technology, investment and cost benefits. This is really a revolutionary programme as it is the first time that the organised scientific community will be coming out of their laboratories and participating in the actual development of the backward areas of the Country. The council is also setting up a manpower data bank to make available scientists demanded by various technical development projects. It is also at work on the programme of self reliance and for this purpose has prepared a list of all imports above Rs. 1 crore which is being matched against indigenous capabilities in the national laboratory and industry. It reports that in 1972 it released 115 processes for commercial exploitation making a total of 583 processes of which 254 are in production bringing in a revenue of Rs. 72.2 lakhs. Another CSIR programme, the National Institute of Oceanography in Cochin—the foundation of its permanent Rs. 40 lakh building were laid in mid May—will be a useful means of further developing ocean research into living and non-living resources in the southern region of Tamil Nadu and Kerala. Already sea foods export is earning Rs. 50 crores in foreign exchange per annum and apart from the mineral sands of South Kerala, our mineral continental shelf is awaiting development. The Institute is now putting into commission its first research vessel "R. V. Gaveshari" for regular oceanographic work by the 16 scientists aboard the vessel around the coasts of India. The work of the Institute will be considerably expanded when the Marine Resources Development Commission recommended by the NCST is established. In this area of atomic energy, the use of nuclear tool techniques for areas of national development of radio isotopes in diagnosis, treatment and research in individual community health and small radio isotope laboratories in a number of hospitals are being provided. Rust resistant wheat varieties, groundnut mutants with higher oil content, jute improved fibre and maize with improved protein contents are some of the agricultural applications planned. A systematic evaluation of nitrogen fixation of soil and biological control of insect pests are a third programme. Finally the food preservation by irradiation and increasing the shelf life of perishables such as fruits, vegetables, sea food, etc. through ionising radiation are in the programme. A further interesting scientific factor is the National Institute for Training in Industrial Engineering Study that industry use of computer particularly at the unit level has led to no retrenchment in any industry. Trade Union opposition has simply led to extensive use of computers in industry with high quality and sophisticated application about which little is known. As of June 1972, 170 computers are in use, 80 in industry, 14 in Government, 20 in education institutions, 21 in research agencies, and 33 in public utilities. We are now moving to the manufacture of third generation computers and the study rightly recommends that the Bureau of Public Enterprises should set up a department of computer based management information systems for the public sector, that a public corporation for computer manufacturing soft ware should be established, education and training in soft ware in all appropriate educational institutions should be speeded, export of soft ware should be facilitated and preparations made now for manufacture of fourth generation computer. The recommendations need examination by CSIR and DAE and appropriate decision by the Union Government.

Health :

The question of reducing the number of admissions in the eight Government medical colleges in the State in order to improve the quality of training is once more exercising the Government. In 1971, on the recommendations of the committee headed by Dr. B. Natarajan, the Government reduced the number of seats in the 8 colleges by 110 (from 1,125 to 1,015). The norm suggested by the committee is 100 per college, with 50 to 75 for a post graduate institution. In view of the over crowding of the colleges, its class rooms, wards and operation theatres, and the difficulties of clinical postings, the committee had recommended that the 8 colleges should have only 700 students and that a new college be opened in Salem. The Task Force on Health, Family Planning, Nutrition and Sanitation of the State Planning Commission had endorsed these recommendations and suggested the early start of the new college. The Union Government, however, did not approve the start of new medical colleges and so the Government is now faced with a further reduction of the admissions in order to raise standards in medical education in the State. There is also the problem of Government employment of the doctors, which is a tradition of employment which will have to be changed following the example of the medical cooperative set up by medical graduates in Kerala (see Vol. III page 197). In fact the Union Government is planning to reorient the entire system of medical education in order to give it a rural bias. It is also planning to launch some pilot projects to provide essential medical aid to the rural people during the current year. These efforts should help to develop a climate for service by medical graduates in the health starved rural areas and the provision of the necessary infrastructures in those areas by the Government. The Union Planning Commission has now established guidelines which is in line with the Task Force recommendations of this State. The Fourth Plan family planning performance for the Country is poor. It was to bring down the birth rate from 39 per thousand in 1968-69 to 32 per thousand by the end of the Fifth Plan. To achieve the Fourth Plan objective, 28 million couples should be covered by 1973-74. By July 1972 only 12 9 million have been covered and in the remaining 20 months the operation goal requires covering 15 million more couples, involving 10 million more sterilisation 5 million more IUCD insertions and 10 million more users of conventional contraceptives and these goals will not be reached for the Country. Among 8 States which are doing better than the national average of 12.8 per cent coverage of couples, Tamil Nadu is doing very well being the third in sterilisations (29.3 per thousand) after Maharashtra and Gujarat, though on IUCD performance is poor. In order to reach the birth rate target of 25 per thousand by the end of the Fourth Plan, the Union Planning Commission sets forth 7 guidelines: integration of Health, nutrition and family planning services; converting the programme into a mass movement through wide popular participation of voluntary bodies and elected representatives; high priority for infrastructure of needed staff, buildings, vehicles and equipment; training medical and para-medical personnel; expansion of material and child health programmes; reorganisation of urban family planning centres; and a streamlined and effective organisation. The Fifth Plan calls for a special effort for all parts of the Country to attain the modern birth rate established by the commission.

* * * * * *

V. Employment:

The expert committee on unemployment, which has been at work for over two years (see Vol. II No. 5 page 24-25) and No. 11 page 36 of the Bulletin) presented its report to the Union Government in mid May. The report is disappointing because it lays heavy stress on creating more machinery to deal with employment problems, has little specific information on the magnitude of employment and unemployment problems facing the Country and presents no effective or innovative programmes for generating employment or reducing unemployment. One of its working groups on agriculture estimates that in the rural areas at the end of the year 7.9 to 21.3 million persons will be unemployed. At the start of the Fourth Plan 9.12 to 22.52 million persons were unemployed (the wide range is a reflection of the range between the unemployed and the under-employed), so that the working group concludes that the Fourth Plan has made no dent on the problem of backlog to unemployment. If the Fourth Plan agriculture and allied sectors targets are achieved by 1974, it would generate 18 million man year unit employment which would be additional jobs for 17.98 million persons entering the labour force between 1969-74 against some 19 millions who actually entered in, rural unemployment, has been aggravated in the Fourth Plan. As for the urban sector, the employment exchange records of the Union Government show that as on December 31, 1972 there were 6.8 millions registered for employment. Between April and December 1972, 4.1 million of them competed for 6,52,000 vacancies and 3,70,000 had been placed in employment. In Tamil Nadu 4,76,234 persons were registered as unemployed, 39,972 vacancies arose and 26,395 were employed against those vacancies as between April and December 1972. This is representative of the situation in all States except in Uttar Pradesh (60,140 placements against 8,14,270 applicants) Maharashtra (27,817 placements against 5,98,174 applicants). The annual report on employment and training of the Union Ministry of Labour states that employment in the organised sector rose from 17.4 millions in 1970-71 to 17.9 millions in 1971-72, that is by 2.8 per cent compared to previous year's 2.5 per cent. The organised sector performed relatively well showing an increasing trend. Employment in the public sector which accounts for 62 per cent of the total increased by 3.9 per cent (compared to 3.4 per cent in 1970-71), particularly in the quasi-government bodies which rose by a high 9 per cent. The Fifth Plan employment perspective during that period will increase by 19.04 million. Full employment requirements for these new entrants will be 17.94 million man years. Adding to this the minimum outstanding employment in 1974 of 7.9 million persons, the Country would have to provide employment to 25.84 million persons or if under employment is taken in account 39.24 million persons by the end of the Fifth Plan in the rural areas. This is appaling and demands a restructuring of the economy and our planning. 59.20 million man year units of employment can be generated during the Fifth Plan with an investment of Rs. 7,242 crores in massive construction activities, minor irrigation, soil conservation, land reclamation, rural roads and forestry. The Bhagwati committee rejects an unemployment relief programme for the Fifth Plan on various financial, technical and administrative grounds. Such a programme providing Rs. 30 per month to 10 million unemployed persons will cost Rs. 360 crores per year—which is not available. Also such a

programme raises questions of relief criteria, the quantum and duration of relief to each person, the complex administrative and organisation arrangements including the possibility of malpractices, the generation of attitudes of laziness and indifference to work and possibilities of serious inflationary pressures. In place the committee recommends continuation and expansion of the current special employment programmes which are also asset creating. It recommends special assistance to the old, infirm, handicapped and those who are affected by rapid technological changes. In fact it proposes that a scheme of unemployment insurance should be adopted for all persons through a marginal addition to current rates of contribution. The commission also examines the pros and cons of reducing the working hours from 48 to 42 per week and a seven days week with staggered weekly holidays but in view of the complex economic issues involved do not make a recommendation on them. It also touches on the effects of mechanisation and automation on employment (referred to earlier under the Science section) and draws the conclusion that in our labour abundant economy, built in strong constraints and disincentives on the use of highly mechanised devices should be established so that in the choice of appropriate technology there is a bias against mechanisation and sophisticated techniques except in the case of self employed artisans and scientific and technological R & D. On this matter the NITIE report referred to earlier provides a more adequate and rational guideline. The commission's main recommendation is for setting up new machinery. It proposes a National Commission on Employment and Manpower Planning as an autonomous body of a few members and a full time chairman which will conduct periodic reviews of employment, unemployment and manpower situation indicating particular areas demanding attention, make projections of the labour force and different categories of manpower at different levels both from the supply and demand side and advise ministries and departments on policies and programmes of employment generation, Second the committee recommends that both at the Union and State levels agencies dealing exclusively with manpower planning and employment should be merged and formed into a separate department. At the national level it recommends that the Directorate General of Employment and Training, the Directorate of manpower and the Manpower Cell in the cabinet secretariat be merged to form a department of Employment and Manpower Planning. Third the committee recommends a committee of secretaries of the Union Government under the chairmanship of the cabinet secretary to follow up the national commission's suggestions and recommendations and taking the necessary administration and follow up decisions to guide the various department and ministries. Fourth it also recommends a Parliamentary Committee on Employment to examine periodic reports of the Department of Employment and Manpower Planning and the National Commission and the Union Government. The committee recommends that the employment generation programme should be financed by mobilising reesources from the well to do and developed sectors of society and particularly from the agricultural sector. It believes that the vast resources needed for this programme can be raised by taxation and monetary policies (which sounds like deficit financing) and surcharges and cesses. The report is no more than a starting point for further work on the problem of unemployment and underemployment and the needed programmes and the means of financing them.

For the current year Rs. 238.22 crores have been allocated for special employment programmes; Rs. 68.22 crores for educated unemployed, Rs. 27 crores for special employment schemes and Rs. 50 crores for the crash rural employment scheme. As pointed out in the last issue (page 362), the trend of educated unemployment is on the increase. The number of educated unemployed registered with the employment exchanges has increased from 15.3 lakhs at the end of 1969 to 32.8 lakhs on December 31, 1972 according to the Union Planning Commission's report. The guidelines for the educated unemployment programme launched for this year include giving first priority to schemes in industry, commerce and service which generate employment and which use to the maximum institutional finance. A second priority is training educated unemployed in vocational skills for absorption in Fifth Plan programmes. A third target is to provide gainful employment to all qualified engineers and technologists by the end of the current financial year. For this the Government has launched 550 rural engineering surveys for the formulation of schemes for the provision of irrigation, electricity, drinking water, road facilities, improved land and water management.

In the State the scheme for assiting the poorer sections of the people with credit facilities for self employment and to start petty trades and small industries was launched in mid May. The State Bank of India is executing the scheme in 10 industrially backward districts. Loans are granted on the personal security of the person and not on a property pledge, the interest rate is 4 per cent and repayments in easy instalments over a long period. As part of the 1,00,000 youth against famine programme launched by the Union Ministry of Education through the National Service Corps referred to in the last issue (see page 362), 4,000 youths joined in the campign in the State from early May. About 1,500 students of the Madras University and 500 non-student youth are housed in 20 work camps around 8 irrigation projects involving constructing canals, desilting tanks, and afforestation covering 60.000 acres in Coimbatore, Dharmapuri, North Arcot, Tiruchi, Thanjavur and the Nilgiris districts. Another 2,250 students of the Madurai University and 750 non-student youth are in 30 work camps deepening 27 minor irrigation tanks and digging two new tanks. In the evenings they are engaged in various forms of informal education such as consulting villagers, forming youth and farmers' clubs, and organising village sports and recreation activities. Some of the youth will also be engaged in scientific soil conservation, storage and regulated supply of water and an effective means of bringing the student community in live touch with rural life give them some skills and preparation for future employment and help in the creation of permanent defences against drought in the rural areas. The work started by these student and youth groups which has usually to end in 8 to 10 weeks also calls for community participation and follow up with governmental assistance. This means that the starting point of the programme should always be what the community wants and feels it must have. It cannot and should not be an imposition from above.

* * * * * *

VI. Other Items

ICSSR Review Committee:

The Fifth session of the ICSSR review committee met in Simla on the 26th and 27th of May, following the Asian Conference on Social Science teaching and research and in Delhi on the 28th and 29th. It met and exchanged views on programme priorities and the role of the ICSSR with some 80 social scientists from Punjab, Haryana, Uttar Pradesh, Madhya Pradesh and Rajasthan. One of the groups, the economists, indicated the priorities for research in the Fifth Plan while the sociologists, psychologists, anthropologists, political scientists and management specialists expressed agreement with the main trends in their discipline and in what manner ICSSR can improve its procedures and activities to push forward research. The committee also met with some 12 users of research – mainly from the Union Ministries of Scheduled Castes, Scheduled Tribes, social welfare defence, prisons and FICCI. In this meeting a whole range of urgent problems calling for social science research and publication of reviews of some work being done by these agencies came to light. There was also a very good meeting with vice-chancellors and registrars who expressed their readiness to promote inter-disciplinary research through introducing the semester system and internal evaluation to start with at the M A. level, as Delhi University has done and the difficulties they are facing with devising a new course content and with the acceptance of internal evaluations. The vicechancellors also expressed their willingness not to follow the regular university regulations with regard to appointments in regard to ICSSR research grants and speed up procedures for the forwarding of applications for research grants, fellowships, publications and discussions with the Union Education Minister centred around questions of philosophy and linguistics, autonomy of the Council and relations with the council for history and other areas. The committee also met the Union Minister of Labour who indicated the priorities he faces with regard to social science research and in fact requested the committee to become advisors of his ministry on labour and industrial relation problems, which the committee accepted. In meeting with Mr. S. Chakravarty, Member, Union Planning Commission, and the Minister for Planning, the Fifth Plan priorities were discussed and it was agreed that the commission would send the committee a complete list of priorities, dividing them between what it would do as an immediate input into the Fifth Plan and what the ICSSR can do. Discussions with the Minister of Heavy Engineering and with the Director General of the ICMR resulted in similar agreements on priorities for the Council and the cooperative programmes that ICSSR and ICMR can possibly plan and operate in family planning, in the social factor, in inter-disciplinary teaching and in administration of hospitals. The committee also examined the report of the consultant on the procedures followed by ICSSR in awarding or rejecting applications for research grants, fellowships or publications and the comments made by this consultant on the manner in which the procedures had been applied. A sample of 400 out of 1,200 cases had been examined by the consultant. The committee also discussed and approved the outlines of Chapter II of its report – the future development of research.

Asian Conference on Social Science Teaching and Research:

The Asian conference on social science teaching and research was held at the

Indian Institute of Advanced Studies in Simla from May 21 to 26. It was attended by 33 social scientists from 14 countries and from Unesco and dealt with the Country's situation, goals, teaching, research and cooperation. The Country papers on the status of social sciences in each country presented at the conference showed that there was an explosion, an upsurge of social sciences in the Asian regions that links between the sciences and national realities were yet to be worked out and that they are still western oriented; the problems of research and teaching in the national languages, the uni-disciplinary demands and the lack of financial resources for social science research were also noted. The need to define the goals of social sciences by each social scientist taking into account the fact that social sciences have to perform the academic function and the change function, that they have to have a human meaning and social purpose. The goals should include systematic and reliable data collection, specific theories leading to general ones, continuation with planned administrations to respond to social needs and cross cultural and cross national research. The problems and remedies of teaching social sciences facing the countries include the need to differentiate between different audiences, between dissemination of social science culture and preparation of a cadre of professionals, the introduction of social sciences at the school level, improvement of faculty qualifications, and techniques of teachers and the development of socially relevant curricula, the need to incorporate the finding of research into the teaching and the development of inter-disciplinary orientation in teaching. The problems and actions facing social science research in the Asian centres are the need to train personnel in research methodology, the development of documentation centres and data banks, the need to develop inter and multi disciplinary research, the indigenisation of social science research, the utilisation of research results and the allocation of 5 per cent of the 1 per cent GNP that the Asian countries have agreed to set aside for R & D by 1980. The conference also recommended that National Social Science Research Councils be established in countries like Afghanistan and Bangla Desh where they do not exist and that where they exist their functioning be reviewed and upgraded along 12 guidelines that were established. It also recommends that Unesco's programme should become more Asian, that it should assist the establishment of national social science research councils with documentation equipment and supplies, and that its future programme that of the international non-governmental organisations reflect the major Asian concerns of challenges to national identities, inequality, self reliance and poverty. The most important concrete decision of the conference was to set up the Asian Association of Social Science Research Councils (AASSREC) which consists of all Asian national councils or their equivalents, starting with those of the 14 countries attending the conference. The officers of the Association are the officers of the conference—President India, and Vice-Presidents, Bangla Desh, Indonesia, Iran, Japan, Philippines and Sri Lanka until the next meeting of the Association when a permanent constitution will be formed with a long term programme and the new officers elected. The function of the Association is to promote exchanges and develop joint programmes. India through the Indian Council of Social Science Research has offered to provide the secretariat of the Association and run an Asian abstracting service in 2 or 3 disciplines among economics, political science, sociology, psychology, history, geography and linguistics. Japan will organise seminars on problem centred

themes for the Association and offer fellowships for Asian scholars to visit each other's countries. The long term programme will include an Asian Social Science journal, setting up disciplinary and inter-disciplinary teams and translations.

Jesuit Educational Conference:

The third all India Jesuit educational conference attended by some 80 Jesuit educators from all over the Country met at the Sacred Heart College, Shenbaganur, Kodaikannal from May 15-20 on the theme education and social justice. In discussions of the background papers on the socio-economic scene in the seventies and education, the political scene and education, India's successes and failures in promoting social justice and evolutionary and revolutionary approaches to social change and in group discussions on the implications of pursuing the programme of social justice laid down in the Fifth Plan for the joint colleges, staff and administration, some far reaching conclusions were derived. First there was unanimous agreement that Jesuit educational institutions must contribute to the programmes of poverty eradication, agarian reform, fight against corruption and black money envisaged in the Fifth Plan. Second it was agreed that all Jesuits who feel in conscience bound to work for the complete eradication of the present social system should be respected and supported by other Jesuits, whether in agreement or disagreement with them. It also agreed that the existing social system is basically unjust in the sense that its institutions tend to perpetuate and increase injustice. Most of the members agreed that this can be reformed and that all educational institutions should do this by ensuring that the principal of each college is fully committed to this social dimension in education, the staff and students are motivated, that it be reflected in the personal and community examples of Jesuits and by projects to support the untouchability Act, the Tenancy Act, the anti-corruption bill, etc. It was also decided that one or two educational institutions be set up outside the university frame, provide education and training for the reordering of the present unjust society. The conference showed that the Jesuits in India are a small but powerful group for bringing about a just social order through education.

Seminar on Plan Implementation:

The Madras Institute of Development Studies and the Institute for Techno-Economic Studies are organising a seminar on Plan implementation for the State Planning Commission and State Administrative Reforms Commission in September 21 and 22 in Rajaji Hall, Madras. The purpose and programme of the seminar is set forth in its prospectus.

"A Plan is as good as its conception; more decisively, it is as successful as its implementation", declares the State's Fifth Plan. On the basis of the consensus arrived at in the 1972 seminar on the Techniques of Perspective Planning and the principles of Plan formulation and in accordance with its recommendation, a two-day seminar on Plan Implementation is being organised by the Madras Institute of Development Studies and the Institute for Techno-Economic Studies for the Administrative Reforms Commission and the State Planning Commission on Friday, the 21st and Saturday, the 22nd September, 1973. At the national, State and district level, Plan implementation poses various problems and reveals constraints which need to be identified, analysed and remedied. These include: (a) the rate of execution of programmes and projects; (b) the machinery and procedures for the

execution of programmes and projects; (c) the monitoring and evaluation of the execution of programmes and projects; and (d) the participation of various groups: the private sector, universities and research institutions, trade unions, the local community, etc.. in the implementation of programmes and projects.

The seminar will provide an opportunity for 40 personnel from the Government departments, the State Planning Commission and Administrative Reforms Commission, universities and research institutions and District and Panchayat Union bodies to discuss the problems, methodologies and models for improvement and effective execution of programmes and projects with particular reference to the Fifth Plan.

Friday, September 21, 1973

10 a.m. to 11 a.m.

Opening statement:

Thiru T. A. Varghese, Chairman, Administrative Reforms Commission.

Inauguration:

Dr. Kalaignar M. Karunanidhi, Chief Minister and Chairman, State Planning Commission.

Concluding comments:

Thiru M. G. Raja Ram, Deputy Chairman, State Planning Commission.

11 a.m. to 12 noon

Plan objectives and execution:

Dr. B. Natarajan, Chairman, Institute for Techno-Economic Studies.

12 noon to 1 p.m.

Rate and rhythm of execution:

Thiru S. Venkitaramanan, Secretary to Government, Finance Department.

2.30 p.m. to 5.30 p.m.

Machinery and procedures:

Thiru P. Sabanayagam, Chief Secretary to Government.

Dr. D. K. Bose, Head of Economic Research Office, Indian Statistical Institute, Calcutta.

Thiru J. Shivakumar, Collector, Coibmbatore.

President Panchayat Union.

Administrative reforms:

Thiru V. Krishnaswamy, Member-Secretary, Administrative Reforms Commission, Madras.

Saturday, September 22, 1973

10 a.m. to 11.30 a.m.

Monitoring and Evaluation:

Dr. Sukhomoy Chakravarty, Member, Union Planning Commission.

Thiru K. S. Sivasubramaniam, Member, Administrative Reforms Commission.

11.45 a.m. to 1 p.m.

PARTICIPATION IN IMPLEMENTATION:

Universities:

Dr. V. Shanmugsundaram, Professor and Head of Economics Department, University of Madras.

Industrial sector:

Thiru N. Mahalingam, Chairman, Sakthi Sugars Limited, Madras.

Agricultural sector:

Thiru A.R. Subbiah Mudaliar, Member, Administrative Reforms Commission.

Voluntary agencies:

Dr. S. Sivasubramanian, Head, Department of Public Administration, Gandhigram Rural Institute.

2.30 p.m to 3.30 p.m.

Training programme for improved execution:

Dr. B. Maheshwari, Director, Administive Staff College, Hyderabad.

3.30 p.m. to 4.30 p.m.

Final resolution :

Dr. Malcolm S. Adiseshiah, Director, Madras Institute of Development Studies.

4.30 p.m.

Valedictory address :

Thiru C. Subramaniam, Union Minister, Industries, Science and Technology.

Seminar on Research Methodology :

The seminar for research supervisors and guides on economics research methodology met in the Karnatak University, Dharwar from May 21 to June 2. It was attended by 20 economists, 15 of whom were supervisors and guides and 5 were resource personnel. The former group consisted of Dr. V. Anantharaman (I.I.T. Madras), K. R. Nanekar (Nagpur University), Yadava Reddy (Osmania University), K.S. Sonachalam (Sri Venkateswara University) N. Nagaraja Rao (Osmania University), Mrs. Sarada Raju (Madras University), T. K. Meti (Karnatak University), C. B. Tigadi (Karnatak University), S. A. Deshpande (Nagpur University), T. G. A. G. Nagarajan (Madras University), K. S. Upadhyaya (Osmania University), Ramachandra Nair (Kerala University), N. Srinivasaraghavan (Madurai University), K. Ramanna (Andhra University) and S. Lakshmana Rao (Andhra University). The poor attendance was a weakness of the seminar. The Universities of Mysore, Annamalai and Bangalore which had registered one research guide each, did not turn up. From Madras, including Gandhigram, two registrants failed to appear. One problem that the seminar faced was that 8 guides from the Sri Venkateswara and Andhra Universities who wished to attend the seminar could not come because of the effects of the Andhra Pradesh agitation and working of the 2 universities in May and June. The seminar was enriched by the participation of the Professor and Head of the Department of Economics of the Nagpur University and that of its Reader. The four resource personnel all turned up and helped in the successful working of the seminar. During the first week Dr. Ranadive and Dr. K.N. Raj led lecture discussions in the afternoon on problems and pitfalls of economics research methodology. During the second week Dr. Subramanianswamy and Dr. Goyal led the discussion on recent developments in economics research. The resource staff helped to stimulate and widen the range of discussion. During the first week there was a detailed discussion of our economics research methodology which had been prepared by Prof. N. Krishnan (Kerala University). The outlines of the curriculum were agreed upon and a recommendation was made to organise a one year course for Ph.D. Students for South Indian Universities in one of the universities of the region by rotation. In the second week the gaps in research were discussed and identified in terms of basic research and some applied research themes on the basis of papers prepared by Prof. G. Mathur and Prof. Shanmugasundaram. The relationship between the research guide and the research student was widely discussed on the basis of a paper by Prof. Anantharaman. The practical proposal that emerged from this discussion was the establishment of a documentation centre to help research staff and students. The recommendation was adopted in the following terms :

It is recomended in accordance with the decisions of the ICSSR conferences held in Madras, Bangalore and Trivandrum in 1971 and in response to inter-disciplinary needs of scientists including economists, that the consortium of 14 southern universities and the university of Nagpur and other universities who wish to join,

establish, with the help of ICSSR a social science documentation centre to serve the social scientists — research staff and students — in the region along the following lines:

1. *Location*: The location of the centre will be the Indian Statistical Institute–Research, Training and Documentation Centre, Bangalore.

2. *Functions*:

(i) microfilm M. Litt. and Ph. D. thesis in social sciences of the 15 universities and make them available to scholars on demand,

(ii) microfilm or procure back numbers of journals and books which are out of print,

(iii) publish abstracts of social science books and periodicals published in India and run a research news letter to disseminate research information,

(iv) develop into a library for social sciences for these universities and make available its hostel facilities for stay and study by social scientists,

(v) promote the establishment in each university of a non-lending text book library centre to meet the needs of the social science staff and students,

(vi) plan the development of a data bank, and

(vii) carry out other documentation centre activities.

3. *Finance*: Each university should ›tribute Rs. 2,000/- annually for the urring cost of the centre and the ICSSR rupees one lakh annually plus the no recurring cost. The possibility of UG also financing the centre should be e: plored. Non-university institutions ca use the centre on payment of fees.

4. *Implementation*: The Karnatal University is requested to take the lead in circularising this proposal to all vice-chancellors concerned and securing the agreement of the universities to the centre and financial aid from the UGC. The ICSSR regional centre, Hyderabad is requested to help in establishment of the centre. The ISI is requested to accept this project and help in its development. The Madras Institute of Development Studies is requested to help the Karnatak University and negotiate with the ISI centre Bangalore and ICSSR New Delhi for the realisation of the project.

Dharwar is a delightful place and an ideal campus in many ways. Dr. Meti and his colleagues did all they could to make the seminar and its participants function in an effective manner.

June Development Seminar:

The paper on Animal Husbandry in Tamil Nadu by Father Prof. Devasia for the June session of the Madras Development Seminar together with a summary of the discussion of the paper at the seminar chaired by Dr. Malcolm Adiseshiah, appears as the first article in this issue.

Second Article:

A paper on Problems of Social Sciences in Asia appears as the second article in the issue.

ANIMAL HUSBANDRY IN TAMIL NADU

By

Rev. A. Devasia, S. J.

Professor and Head of the Department of Economics
Loyola College, Madras.

I. Introduction :

1.1: The Task Force on Animal Husbandry appointed by the Tamil Nadu Planning Commission submitted its Report in October 1972. The Task Force consisted of its Chairman, Dr. B. Natarajan, and nineteen members who worked in two groups, namely, a Working Group on Livestock Planning and a Working Group on Dairy Development. It examined various aspects of the Animal Husbandry Sector; achievements so far made, constraints encountered, objectives and strategies to be adopted in future, input requirements, likely output and employment potential. It has proposed a new organisational set-up for promoting this important sector.

1.2. In 1970-71, the capital value of the livestock and poultry was estimated at Rs. 327 crores and the net value of livestock products was estimated at Rs. 170 crores, which accounted for 6 per cent of the State's total income.

1.3. A comparative picture of India's livestock as against the world's livestock in 1961 is given below :

(1)	(2)	(3)	(4)
Type of livestock	*World (millions)*	*India (millions)*	*Percentage in India to the World.*
Cattle	976.9	175.5	17.9
Buffaloes	102.1	51.2	50.1
Sheep	1005.7	40.2	3.9
Goats	353.5	60.9	17.2

1.4. The following statistics show the comparative strength of livestock in Tamil Nadu and India in 1966 :

(1)	(2)	(3)	(4)
Type of livestock	*India (millions)*	*Tamil Nadu (millions)*	*Percentage in Tamil Nadu to India*
Cattle	176.60	10.86	6.1
Buffaloes	52.90	2.72	5.1
Sheep	42.00	6.62	15.8
Goats	64.50	3.77	5.8
Pigs & Others	7.70	0.60	7.8
Total livestock	343.70	24.57	7.1
Total Poultry	115.10	11.23	9.7

1.5. The milk yield per lactation of Scandinavian cows is 17 to 25 times that of Indian non-descript cows. The milk yield per lactation of Indian cows varies tremendously from breed to breed and from place to place as shown below:

		Madras	*Coimbatore*	*Madurai*
COWS:		(in kgs.)	(in kgs.)	(in kgs.)
	Urban	2832	1740	1638
Jersey				
	Rural	2200	1602	1719
	Urban	2473	—	—
Fresien				
	Rural	2136	—	—
	Urban	2168	1908	1640
Sindhi				
	Rural	2049	1481	1255
	Urban	430	708	560
Non-descript				
	Rural	340	642	560
BUFFALOES:				
	Urban	4064	2514	2435
Murrah				
	Rural	2562	2492	2749
	Urban	615	1558	1115
Non-descript				
	Rural	558	1514	625

1.6. In Tamil Nadu there is a tremendous gap between the availability and the requirement of animal products for balanced diet as shown in the following statistics:

Category	*Per capita daily availability*	*Per capita daily requirement for balanced diet*
Milk	63 gms.	300 gms.
Egg	1 gm.	8.4 gms.
Fish and Meat	26 gms.	40.00 gms.
Total	90 gms.	348.4 gms.

1.7. The statistics reveal the existence of serious deficiencies in animal products available for consumption in Tamil Nadu. The Planning Commission's Task Force has therefore set certain objectives to be achieved by the end of the Perspective Plan and outlines certain strategies for the achievement of these objectives. The objectives are the following:

(1) To increase milk production nearly 6 times from 972 million Kgs. in 1972 to 6016 million Kgs. in 1984.

(2) To increase milk consumption five fold from 63 gms. per day per capita in 1972 to 300 gms in 1984.

(3) To increase egg consumption per head per day from one gr. in 1972 to 8.5 gramms per head per day in 1984. This would mean increasing egg production more than 8 times.

(4) To double the availability of meat from the present 4 grms per head per day to 8 grms by 1984.

(5) To increase the present availability of animal proteins from 3.4 grms per head per day to 14.2 grms in 1984.

(6) To increase the contribution of the Animal Husbandry sector to the State income from the present 6 per cent to 16 per cent in 1984.

(7) To create more employment opportunities.

1.8. These objectives are to be achieved by multi-sector developments, namely, Dairy Development, Sheep and Goat Development Veterinary and Public Health, Poultry Development, Piggery Development, and Veterinary Education and Research. The financial outlay envisaged for the Perspective Plan period is Rs. 216.39 crores. The distribution of the plan outlay is given in appendix one.

1.9. The Task Force has outlined the following strategies:

(1) Upgrading the indigenous cattle with quality exotic germ-plasm for high milk production.

(2) Upgrading of local buffaloes with quality Murrah bulls.

(3) Breeding through artificial insemination.

(4) Providing adequate health cover through establishment of a net work of veterninary institutions.

(5) Establishing large size layer farms and hatcheries for poultry development.

(6) Multiplying Yorkshire pigs in a massive way for meat production.

(7) Improving the quality of sheep for mutton, skin and wool.

(8) Increasing feeds and fodder production adequately to support the production programmes.

(9) Improving marketing facilities for milk and eggs.

(10) Strengthening and streamlining the Animal Husbandry Department to cope with the plan work.

II. Cattle Development

2.1. In Tamil Nadu, a vast majority of the bovines are non-descript and poor milk-yielders. In the districts of Chingleput, Coimbatore and Madurai, the better breeds of cattle such as Jersey, Sindhi and Murrah are relatively more numerous than in the other districts. The State has undertaken several schemes for the development of cattle such as upgrading the cattle through cross breeding and artificial insemination. There are at present seven Livestock Farms in the State. They are situated at Hosur, Orathanad, Puthukottai, Chettinad, Abishekapatti, Ooty and Chinnasalem. The breeds maintained and the strength of cows and heifers maintained at these farms are indicated in appendix Two.

2.2. One of the main problems of these farms is scarcity of water. A minimum of Rs. 60 lakhs will have to be spent to provide them with adequate water supply.

2.3. During the Plan period, the Government started Key Village Schemes in 88 blocks, 76 Key Village Supplementary Extension Centres, a Cross Breeding

scheme in Ooty, a Hill Development Scheme in Kodaikanal; three Intensive Cattle Development Projects, 23 Goshala Development Schemes and a number of artificial insemination centres and cross breeding Schemes. In the absence of adequate information regarding the extent of their activities, it is not possible to assess the extent of their success.

2.4. The average annual milk yield is only 186 kgs in the case of Indian cows and 369 kgs in the case of Indian buffaloes. Cows in Western countries yield 2000 to 3700 kgs per year.

2.5. If the present rate of growth of milk production were to continue for ten years from 1974 to 1984, the requirement and deficit of milk in Tamilnadu would be as follows on the assumption of 300 gms. of milk as the per capita daily requirement :

	1974.	1979.	1984.
Human Population (million)	44.04	48.86	53.69
Availability of milk (million Kg.)	1026.57	1103.96	1210.09
Requirements (million Kg.)	4822.30	5350.17	5879.06
Deficit (million Kg.)	3796.03	4246.21	4668.97

2.6. The Task Force proposes 14 Intensive Cattle Development Projects with a Chief Project Officer at the State head quarters to coordinate the whole scheme, and 14 Project Officers in charge of each Project, each assisted by 5 Assistant Project Officers. Each Assistant Project Officer will supervise the work of four Veterinary Assistant Surgeons, each of whom will be in charge of five Artificial Insemination Sub-Centres. Each Artificial Insemination Sub-Centre will be manned by an Inseminator. Provision of fresh semen, frozen semen, semen bank, jeeps for semen transport, training courses for veterinary personnel, etc., will be part of these projects. Each Intensive Cattle Development Project will cover one lakh breedable cows.

2.7. The areas not covered by the Intensive Cattle Development Projects will be covered by the Key Village Scheme. There are at present 75 Key Village Blocks covering 7.5 lakh cows and buffaloes. In the fifth plan, additional 100 Key Village Blocks will be established to cover additional one millon breedable cows and buffaloes.

2.8. The programme envisages the private sector to play a main role in the development of cattle and production of milk with the Government providing technical help for the maintenance and improvement of the livestock and the marketing of milk.

2.9. The total financial outlay for the scheme is Rs. 26.88 crores, consisting of Rs. 18.36 crores in the Fifth Plan and Rs. 8.52 crores in the sixth plan. Some of the items of expenditure are given below :

	Rs. lakhs.
(1) Expansion facilities at the existing Farms	60
(2) Purchase of exotic breeds (500 heifers & 50 bulls)	50

		Rs. lakhs.
(3)	Purchase of 1000 Murrah buffaloes to strengthen the breeding herds at the existing farms	20
(4)	Purchase of 300 Murrah buffalo bulls for artificial insemination centres	4
(5)	Two additional farms to be set up	50
(6)	Subsidy to rearers of heifer calves (to prevent premature sale)	150
(7)	20 new Goshalas	4
(8)	Progeny Testing Schemes	50

2.10. As a result of the implementation of this scheme, the Task Force expects to turn Tamil Nadu's 1974 milk production deficit of 3796 million kgs to a surplus of 137.24 million kgs in 1984. In 1984 the per capita daily milk consumption will be 307 gms. Details of this expected development are given below :

	1974	*1979*	*1984*
Human Population (millions)	44.04	48.86	53.69
Availability of Milk (million kg)	1026.57	2260.00	6016.30
Requirements (million kg.)	4822.38	5350.00	5876.06
Deficit (million kgs)	3795.81	3090.17	—
Surplus ,,	—	—	137.24

III. Dairy Development :

3.1. According to 1966 census, Tamil Nadu had 2.81 million milch cows and 1.2 million buffaloes. Milk is produced mainly in the villages by a large number of scattered small producers and sent to urban areas for consumption.

3.2. The Madras Cooperative Milk Supply Union and its affiliated supply societies were started in 1967 with a fully equipped dairy plant for processing milk. Subsequently milk supply societies were started in Ooty, Coimbatore, Erode, Virudhunagar and Tirunelveli.

3.3. In 1971-72 Tamil Nadu had 2278 milk supply cooperative societies and 23 unions handling on an average 2.33 lakh litres of milk daily. At present pasteurisation facilities exist at the following dairies: Madhavaram, Coimbatore, Tiruchi, Thanjavur, Erode, Ooty and Kodaikanal. Supplementary chilling/cooling facilities are available at the following centres: Perambalur, Mannarkudi, Kumbakonam, Manaparai, Nagapattinam, Tiruvarur, Mayuram, Namakal, Karur, Tiruppur, Dindigal, Srivilliputhur, Virudhunagar, Manamadurai, Kovilpatti, Sankarankovil, Bodinayakanur.

3.4. Barring a few Unions and Societies (e.g. Coimbatore and Virudhunagar), all other Cooperative Societies are linked with the Madras Milk Project which operates almost in the entire State and handles about 1 lakh litres of milk daily. However, this large scale operation of the Madras Project has not evoked satisfactory response from milk producers because of of the absence of assured procurement and prompt payment.

3.5. In the private sector there are th modern plants for preparation of dair

products, one at Erode and the other at Uthukuli, and a few smaller plants.

3.6. Under the "Operation Flood" scheme, which covers the four cities of Bombay, Delhi, Calcutta and Madras, Tamil Nadu Government will receive Rs. 8.87 crores. To implement this scheme the Government has established the Tamil Nadu Dairy Development Corporation which has also assumed all the functions of the Madras Milk Project. The Corporation has an integrated approach to provide all necessary inputs in selected areas. The areas selected are the following:

(1) Kancheepuram/Ambur belt in Chingleput and North Arcot District.

(2) Coimbatore/Erode/Salem area in Coimbatore/Salem Districts.

(3) Tiruchirapalli/Thanjavur belt in Tiruchirapalli/Thanjavur Dist.

(4) Madurai area in Madurai Dist.

(5) Nilgiris District.

3.7. The Tamil Nadu Dairy Development Corporation has an ambitious plan of action which includes the following projects:

(1) In North Arcot District: Increasing the capacity of the Dairy at Sathuvachery near Vellore to handle 25000 litres of milk daily; establishment of three instantaneous coolers as intermediate collection facility; improving the existing chilling facilities at Baluchettichatram; establishment of another Dairy with a capacity of 25000 litres per day within the project area.

(2) In Salem-Coimbatore District: Establishment of three instantaneous coolers as intermediate facility; conversion of the existing chiling centre at Tirupur into a pasteruisation plant to handle 20,000 litres of milk per day.

(3) In Tiruchirapalli District: Conversion of the existing chilling centre at Mannargudi into a pasteurisation plant to handle 20,000 litres of milk per day; establishment of two instantaneous coolers in the project area as intermediate collection facility.

(4) In Nilgiris District: Establishment of two instantaneous coolers as intermediate facility to feed the existing dairy.

(5) In Madurai: The establishment of a milk powder plant with a capacity of 5000 litres of milk per day.

(6) Increasing the handling capacity of Madhavaram Dairy from the present 50,000 litres to 1 lakh litres per day.

(7) Purchase of a fleet of tankers—about 50—to transport milk from project areas to Madras City at a cost of Rs. 2.13 crores.

3 8. The integrated approach of the Dairy Development Corporation will include the provision of different kinds of inputs to the producer such as veterinary care, dairy extension service including artificial insemination, advice and assistance for fodder cultivaton, supply of cattle food and breeding facilities. There will be one Veterinary Surgeon for a population 5000 cattle and one trained village level worker for a population of 250 cattle. While the Corporation will provide integrated services to milk producers, the Animal Husnandry Department will continue to provide the usual veterinary services.

3.9. The facilities available at Madhavaram will be fully utilised for resettling the cattle from the City. Young stock and dry stock of the City will be reared at Madhavaram till they become productive

and then sold in the project areas selected for cattle development and in the outskirts of the City.

3.10. The breakup of the allocation of Rs. 8 87 crores under the Operation Flood scheme is given below :

Schemes		Outlay proposed (Rs. Lakhs)
Expansion of Madras Dairy	:	27.00
Establishment of a new Dairy	:	200.00
Establishment of Feeder Dairies	:	213 00
Provision of Technical Inputs	:	293.00
Resettlement of City cattle	:	154 00
Total	:	887.00

3.11. The Operation Flood project will cover only 2.5 lakh milch cows and will make available to the City of Madras 2.5 lakh litres of milk per day. For the large number of milch cows and buffaloes not covered by the Operation Flood scheme, other means of assistance have to be provided. These will include formation of rural cooperative societies for common services, creation of heifer rearing farms, fodder farms, feed mixing units, provision of short and medium term credit for the purchase of milch animals and above all fixation of reasonable price for milk. These services will involve an expenditure of Rs. 4 crores during the Perspective Plan period.

3.12. Since insurance is a Central subject, an alternative scheme of Cattle Mortality Fund is proposed to cover animals owned by members of milk supply cooperative societies. A mortality fee based on the value of the animal will be payable every month in the case of animals in the age group of 2 to 8. The scheme now operating in Coimbatore may be extended to the whole State.

IV. Animal Health

4.1. The prevention of diseases and the preservation and improvement of animal health are of the utmost importance especially in the Indian context. At present there are only 35 Veterinary Hospitals and 495 Veterinary Dispensaries in the State. Besides, there are 1918 sub-centres under the Panchayat Unions. These sub-centres are under Livestock Assistants who attend to minor ailments and conduct preventive vaccinations.

4.2. Animal health implies control of contagious diseases, treatment of general diseases, control of productive hazards and control of human health hazards. In every one of these areas, definite action is recommended by the Task Force.

4.3. For the control of infectious diseases, the present system is inadequate. At present there are 1918 subcentres, each covering five Panachayat Unions on the average of 7000 cattle and buffalo population. The Task Force has recommended the establishment of an additional 1000 subcentres. Besides, all these subcentres should be controlled by the Animal Husbandry Department, and not by the Panchayat Unions. At present there are 285 Veterinary Assistant Surgeons to serve 1918 subcentres. The additional Veterinary Surgeons required are 300 in a period of 10 years.

4.4. At present each District has one Clinical Laboratory, where the services and staff are inadequate. These Clinical

Laboratories should be upgraded and placed under Research Officers with suitable staff and equipment.

4.5. Although there are 35 Veterinary Hospitals in the State, only two (at Coimbatore and Tirunelveli) have adequate facilities. The Task Force has recommended that the other 33 Veterinary Hospitals should be upgraded with competent staff and facilities, and an addition of 70 new Veterinary Hospitals should be established by upgrading some of the existing Dispensaries.

4 6. The Task Force also recommends the establishment of 20 Physio-Pathalogical Clinics, one in each District, equipped with mobile units, for routine examination and treatment of animals; control of productive hazards by castrating scrub bulls when they are one year old (instead of 2 and a half years old as at present); reduction of the present long, unproductive calving period between milking periods; and more effective control of endo-parasities and ecto-parasities.

4.7. To prevent human health hazards, slaughter houses should be regularly inspected by qualified veterinary surgeons. Cooperative Milk Supply Societies and milking herds too should be inspected.

4.8. The financial outlay involved in the implementation of these schemes is Rs. 13.76 crores.

V. Veterinary Biological Products :

5.1. Prior to 1932, the biological products required for protecting the livestock in the State were obtained from the Indian Veterinary Research Institute, Mukteswar, U.P. As the supply was insufficient and uncertain at a time when rinderpest was raging in many parts of the State, the Government started a similar Institute in 1932 which has developed into the Institute for Veterinary Preventive Medicine at Ranipet. This Institute is now able to meet the needs of Tamil Nadu in most of the products required and is supplying its products to other States. The Report lists the names of 21 different kinds of products manufactured at Ranipet, including a dozen varieties of vaccine.

5 2. There has been a proposal to set up an Immunological Laboratory under the Operation Flood scheme with financial aid from the United Kingdom. The Task Force has suggested that this Laboratory should be situated in the campus of the Institute at Ranipet.

5.3. The new strategy proposed by the Task Force consists of various courses of action such as the following:

(1) Increasing and improving the output of biological products and provision of equipments for production and research.

(2) Training of adequate personnel both in India and abroad.

(3) Production of the most suitable vaccine for the protection of cross-breeds against Foot and Mouth disease and the establishment of a laboratory for this purpose.

(4) Production of various kinds of vaccines such as Swine Fever and Distemper vaccines, anti-rabies vaccine, etc, and improvement of the existing vaccines.

5.4. The additional staff required for the implementation of these schemes is estimated at 134. The financial outlay would be Rs. 100 lakhs, spread over the Fifth and Sixth Plans.

VI. Poultry Development :

6.1. Indigenous hens hardly give 50 to 60 eggs per year. Hence for poultry development exotics and corss-breeds are essential. Exotic breeds like White Leghorns and Rhode Island Reds and cross-breeds are becoming increasingly

popular. Under the II Plan, several developments took place such as distribution of pure breed exotics, upgrading of the indigenous with exotic cockerels, supply of birds and equipment at concessional costs, supply of balanced poultry feed, assistance for marketing of eggs and the control and prevention of diseases.

6.2. The poultry population of Tamil Nadu was 8 million in 1951, 9.9 million in 1956, 10.7 million in 1961, and 11.2 million in 1966.

6.3. The per capita consumption of eggs in Tamil Nadu is only 8 numbers per year, or one gramme per day. The task Force thinks that this should be raised to 8.5 grammes per day (i.e. one-fourth of a small egg, or one-sixth of a large egg, per day). The weight of an egg of an exotic hen is about 50 grammes. To provided 53.7 million people in 1984 with 8.5 grammes of egg per day per head, the production will have to be raised to 9 million large sized eggs perday.

6 4. The salient features of the strategy proposed for the achievement of this target are the following:

(1) Provision of Hatching Eggs: Establishment of 90 Large Layer Farms, each with 10,000 layers. These 90 Farms will maintain 9 lakh hatchery layers and provide 5.3 lakh eggs per day for hatching. There will be 630 incubators.

(2) Provision of Table Eggs: Maintenance of 15 million layers in 1.5 lakh units, each unit consisting of 100 layers. A hundred layer unit is considered economically viable in villages. One hundred units can form a village Cooperative Society for common services, collection, etc. By 1984, there will be 150 such Village Cooperative Societies.

(3) The Layer Farms, though primarily meant for the production of eggs for hatching, will supply about 4 per cent of the total annual requirement of table eggs.

(4) The total feed requirement of the 9 lakh layers of the 90 Layer Farms and 15 million layers of the 1.5 lakh village units will be met by cultivating 1 lakh acres of land with maize and lucerne. There will be 45 Feed Mixing Units to prepare balanced feed for the birds.

(5) Every year, 15 million village layers and 9 lakh hatchery layers will be available for consumption, providing about 15,000 tonnes of poultry meat. Besides, out of 20 million male chicks, 16 million or 8000 tonnes of meat will be available for consumption every year.

(6) The total financial outlay by 1984 will be Rs. 34.5 crores and the additional employment created will be for 1.5 lakh persons.

VII. Sheep and Goat Development:

7.1. Sheep and goats are reared throughout the State. Their number has been decling since 1951. In 1951, there were 7.9 million sheep and 4 million goats. In 1966, there were only 6.5 million sheep and 3.7 million goats.

7.2. The value of goat skins rose from Rs. 109 lakhs in 1965-66 to Rs, 142 lakhs in 1966-67, while the value of sheep skins rose from Rs. 157 lakhs in 1965-66 to Rs. 188 lakhs in 1966-67. The value of mutton rose from Rs. 1637 lakhs in 1965-66 to Rs. 1939 lakhs in 1966-67.

7.3. The sheep prevalent in the State are *predominantly of the hairy type*, the woolly type being only about 10 to 15 per cent. The yield of fleece is poor. The Sheep Farm in Ooty was established for selective breeding of exotic woolly sheep such as Romney-Marsh and Merino and for cross breeding with local Nilgiris sheep. Other sheep farms are situated at

Chinnasalem, Sattur, Pudukottai, Hosur, Chettinad and Tirunelveli. The Government of India has established a research station at Mannavanur, on Kodaikanal Hills. The strength of the sheep farms in the State was as follows in 1970-71 :

Name of the Farm :		*Total Number of Sheep.*
Chinnasalem (S. A. Dt.)	...	1200
Sattur	...	1336
Pudukottai	...	1130
Hosur	...	958
Chettinad	..	588
Tirnelveli	...	1595

7.4. Cooperative Societies have been formed to help sheep breeders and cumbly weavers. They are also given loan assistance and subsidy.

7.5. Lack of adequate pasture and grazing land and high humidity are the two serious disadvantages of sheep and goat farming in Tamil Nadu. Hence there is not much scope for increasing the sheep and goat population of the State. Development will have to consist in improving the quality of the livestock by cross breeding with exotics and in preserving the sheep and goats from all diseases.

7.6. The Task Force's proposals are the following :

(1) The indigenous breeds should be continued.

(2) Cross breeding of Madras Red and Mandya should be continued. Similarly, cross breeding of Merino and native Nilgiris sheep should be continued.

(3) Exotic breeds like Corridale South Down and Dorset Horn should be imported for cross breeding.

(4) Experimental breeding should be taken up at Ooty and Chinnasalem.

(5) The sheep breeders should be organised into Cooperative Societies. Each Society will have 2000 ewes and 20 rams. For a group of 10 Societies, one Veterinary Assistant Surgeon will be made available. Financial assistance will be given for the purchase of medicines and equipments.

(6) The total financial outlay for the V and VI plan period will be Rs. 5.4 crores.

VIII. Piggery Development

8.1. Pigs are prolific animals, grow quickly and put on weight faster than other animals. They do not require extensive grazing lands. Hence, the pig, along with poultry, has an important place in meat production in the State. Tamil Nadu has about half a million pigs. The indigenous types are kept by certain classes of people and are not reared in a hygienic manner. There has been a decline in the number of pigs from 1956.

8.2. During the II five year Plan, two piggery units were started, one at Hosur and the other at Kattupakkam. During the Third Plan, there more units were started at Orathanad, Chettinad and

Pudukottai. In 1965, a piggery farm was started at Alamadhi.

8.4. Prof: P.C. Bansil, in *his* book, Food for 700 million, recommends a minimum requirement of 40 grammes of meat per capita per day. The present availability of meat in the State is only 4 gms. Lack of pasture land and natural fodder limit the production of beef and mutton seriously. But poultry and pig offer wide scope for expanding meat production. The poultry programme can provide 2 gms meat per day per capita and piggery development programme can provide 3 grammes of meat per capita per day by 1984.

8.5. Two lakhs of sows and 20,000 boars of Yorkshire pigs will be required as foundation stock with the farmers. The State pig farms will have to be expanded for the supply of breeding stock of exotic sows and boars to the farmers. Modern pig keeping methods will have to be introduced among the farmers. Four to five sows and a boar of exotic type will be supplied to each farmer. Thus 40,000 to 50,000 persons can be provided with employment. The pig farmers will be formed into Co-operative Societies for purposes of credit facilities and other services, including marketing.

8.6. The total outlay envisaged is Rs. 33.30 crores. Of this, Rs. 30 lakhs will be spent on strengthening the State farms with breeding pigs and Rs. 33 crores on pig production through farmers including Rs. 11 crores as loans to farmers.

IX. Meat Hygiene

9.1. Meat hygiene implies inspection of animals before slaughter by qualified personnel, maintenance of hygienic slaughter houses and prevention of contamination of meat and meat products at all stages of distribution.

9.2. There are at present 209 slaughter houses in the State. In 1970-71, 24, 27, 873 animals were slaughtered in these slaughter houses. The existing facilities are inadequate. The slaughter houses should be modernised for the production of clean meat. Adequate number of personnel should be trained in meat inspection work and research into the problems of meat hygiene and technology. The Task Force recommends the establishment of a Meat Board for dealing with trade in animals and for the reorganisation of slaughter houses. Meat processing plants and bacon factores are recommended. The financial outlay proposed is Rs. 1 crore.

X. Feeds and Fodder

10.1. Feeding of livestock is absolutely important for their general health and for the increase of livestock products. The Task Force has wisely examined in some detail the quantitative and qualitative feeds and fodder requirements of the different kinds of livestock during the Plan period. In 1984, feeds and fodder will have to be found for 13 million heads of cattle, 15.9 million layers and 36 million chicks, 2.5 lakh breeding sows and boars, 2 million piglets and probably 10 million sheep and goats.

10.2. The requirement of dry fodder (rice, cholam, cumbu, ragi, maize, pulses) during 1983-84 will be 24 million tonnes as against 13.7 million tonnes available in 1970-71. Similarly, the requirement of green fodder during 1983-84 will be 72.74 million tonnes as against 5.8 million tonnes available in 1970-71.

10.3. The total conventional and unconventional concentrates available as feeds for the livestock in 1983-84 will be 7.96 million tonnes as against the requirement of 9.96 million tonnes (9.6 million tonnes for cattle and 0.36 million tonnes

for poultry and piggery, excluding grain). Conventional concentrates are rice bran, groundnut cake, gingelly cake, cotton seed, horsegram, wheat bran, lucerne meal, etc. Unconventional concentrates are molasses, bagasse, starch thippi etc.

10.4. The strategy proposed to increase the production of feeds and fodder include increasing the existing acreage under sewage cultivation and setting up of new sewage farms so that the area under sewage cultivation would be increased from the present 700 acres to 4000 acres. This would increase green fodder production by 2 lakh tonnes. By extending mixed farming to 10 lakh acres of land, 40 million tonnes of additional green fodder can be produced. By growing lucerne alternately with cereal crops, green fodder production can be augmented.

XI. Veterinary Education and Research

11.1. The Madras Veterinary College was started in 1903. It admits 136 students a year, i e., 120 from Tamil Nadu and 16 from other States, for the B.V. Sc. Course. From 1959, it has been providing a two-year post graduate course leading to M.V.Sc. Facilities are also available for research leading to Ph.D. degree.

11.2. Modern and sophisticated equipments have to be installed to improve teaching and research. New departments for study and research in Biometrics with computer facilities, and for Bio-Medical Engineering and Animal Husbandry Economics should be established. The number of Veterinary Doctors required for disease control and slaughter house inspection will be 2314 in 1984. In addition to this, 305 Assistant Veterinary Surgeons will be required for the poultry sector in 1984.

11.3. Adequate attention has not been paid to research on problems affecting livestock and livestock industry. A modest beginning has been made in the IVth Plan. The theme of research for the next 10 years should be the development of dairy cattle, sheep for mutton, sheep for wool, and poultry for eggs and meat, under the existing agro-climatic conditions of Tamil Nadu.

11.4. The present programme to train 300 farmers per year is insufficient. The number must be increased. Besides, Officers in the field must be given short term training in order to familiarise them with the latest development and techniques in Veterinary and Animal Husbandry fields of work.

XII. Organisational set up for Animal Husbandry Development :

12.1. The Civil Veterinary Department was organised in Madras State in 1891. After the starting of the Madras Veterinary College in 1903, the department began to grow. In 1938, the livestock development work was entrusted to the Director of Veterinary Services and the name was changed to Director of Animal Husbandry in 1948.

12.2. The Department was reorganised in 1970. Under the new set up, Veterinary Education and Research is under the Director of Veterinary Education who is also the Dean of the Veterinary College. All other activities are under the Director of Animal Husbandry who is assisted by one Joint Director and six regional Deputy Directors at Madras, Vellore, Coimbatore, Tiruchi, Thanjavur, and Tirunelveli.

12.3. The Task Force has proposed to reorganise the set up on the basis of technical and administrative functions.

In the proposed set up, under the Director of Animal Husbandry, there will be 9 Joint Directors, each for a different function (such as Planning, Animal Health, Poultry, Fodder Development, Sheep and Pigs, Investigation and Research, Cattle Development). Each Joint Director will have a Technical P.A. and other officers and technicians under him. Every Revenue District will have a Deputy Director of Animal Husbandry with trained officers to organise and coordinate work in the district. The collection of data and statistics pertaining to livestock needs to be reorganised.

XIII. Critical Appreciation :

13.1. The Task Force has done excellent work by analysing past trends and present conditions and proposing strategies for development in a dozen areas of Animal Husbandry in Tamil Nadu. It has prepared the framework of a plan to promote multi-sector development in order to meet the nutritional needs of the State's growing population in terms of milk, eggs and meat. The Plan is certainly bold and ambitious in so far as it aims at increasing per capita daily milk consumption 5 times, per capita daily egg consumption 8 times and per capita daily meat consumption two fold.

13.2. The Perspective Plan also aims at creating full employment for 7437 technical and 14642 nontechnical personnel. Moreover, by 1984, additional employment will be provided for 10 lakhs of farmers by the Cattle Development Scheme, for 50,000 farmers by the Piggery Development Scheme and for 1.5 lakhs of people by the Poultry Development Scheme. All this is extremely desirable at a time when there is acute unemployment and under-employment in the State.

13.3. The Task Force has outlined diverse strategies and programmes to be undertaken, the financial outlay involved, the requirement of technical and non-technical personnel to run the various projects, etc., in order to reach the high targets set for the concluding year of the Perspective Plan. The Task Force deserves to be congratulated for its wide perspective, detailed analysis and bold approach.

13.4. The Task Force's projections and strategies are based on balanced dietary needs prescribed by nutrition experts. This approach has its advantages and disadvantages. One advantage is that it sets definite targets of production and consumption and tries to achieve these ideal goals. Its disadvantage is that it does not give due weight to the vagaries of market demand. To take an example, the Task Force proposes to double per capita daily meat consumption from 4 grammes in 1972 to 8 grammes in 1984 by massive developmental efforts in the area of piggeries and poultry farming with an investment of Rs. 33.30 crores and Rs. 33.48 crores respectively. Supposing that the efforts really succeed, is there any certainty that the people will really double their meat consumption? In a tradition-bound society where socio-cultural and religious inhibitions are still strong, there can be serious imbalances between market demand and supply of meat and eggs. After all supply does not create its own demand. There can be over-production and unremunerative prices. There are no indications to show that the Tak Force based its Report on any elaborate survey of prospective market demand.

13.5. The Plan looks somewhat idealistic and difficult to implement. If, with twenty years of planning and sustained efforts, we have hardly touched the fringe of the problem of low milk production and low egg yield, it is idealistic to think that in 12 years we could increase milk production 6 times, egg production 8 times

and meat production two fold. Undoubtedly we need development, faster development, and for that we have to devise all possible strategies and provide all possible inputs, especially efficient organisation and administrative machinery at all levels.

13.6. The Plan is forward looking and positive. Not much has been said about the deficiencies of the schemes undertaken in the past or the causes of their failure. However, the lessons of the past should not be missed. They could provide valuable guidance for the future.

13,7. The Plan relies heavily on Cooperative Societies as agents of finance, production and distribution. This is ideally desirable in a democratic society where planning should start from the bottom. Efficiently run Cooperative Societies may become genuine agents of social change, economic development and income and employment generation. However, it is well konwn that the functioning of the Cooperative Sector in the past has not been entirely satisfactory. Hence all care and vigilance will be required to prevent their malfunctioning and to assure administrative efficiency.

13.8. The Report says that the poultry development schemes will require the cultivation of one lakh acres of land with maize and lucerne by 1984 in order to provide adequate feeds. The provision of good quality feeds and fodder for the different kinds of livestock in adequate quantity will remain a major challenge. In fact, fodder and feeds have been given the largest allotment of funds in the Perspective Plan, namely Rs. 79.70 crores. Good lands will naturally be used for paddy cultivation or for commercial crops. The production of green fodder in 1970-71 was only 5.8 million tonnes. In 1983-84, the requirement of green fodder will be 72.14 million tonnes. How this target is to be achieved is anybody's guess.

13.9. Out of the total Perspective Plan outlay on animal husbandry of Rs. 216.39 crores, Rs. 79.89 crores will be seed capital and Rs. 136.50 crores will be loan capital. Large scale loan operations may be necessary for developing the animal husbandry sector, raising the productive efficiency of the small farmer in the village and increasing his family income and the State's income. As a measure of social justice, such a policy is entirely laudable. However, the experiences of the past should not be forgotten. Loan operations have been beset with such problems as misappropriation, improvident and unproductive use and irrecoverability. Hence all possible devices should be built into the loan operation system to pervent too facile and wasteful dispersal of funds and to assure their economic use.

13.10. The need for reorganising the Animal Husbandry Department may be genuine, although the set up was reorganised as late as 1970. Before another reorganisation is attempted, the structure and working of the present set up should be thoroughly examined so that the new set up may really become an effective instrument for the white revolution and other radical changes envisaged by the Planning Commission. Besides, in the new set up, the link-up between the Animal Husbandry Department, the Veterinary Education and Research Department, the Dairy Development Department, the Dairy Corporation, the recently established Poultry Development Corporation and finally the Agricultural University should be clearly foreseen so as to achieve the fullest cooperation among them and maximum efficiency.

13.11. We would end on a note of optimism. The few critical comments we have raised do not detract from the essential merits of the Report which

remains a bold and challenging document. It calls for concerted action from the Government and the people. The goals set are great and the strategies proposed are difficult, but not impossible. In fact, there are no easy shortcuts to economic development or full employment or social justice. The effective implementation of the strategies and programmes outlined by the Task Force will revolutionise the animal husbandry sector of the State and lead to substantial increase in employment and income and marked improvement in consumption standards.

APPENDIX — I

FINANCIAL OUTLAY FOR THE PERSPECTIVE PLAN PERIOD FOR ANIMAL HUSBANDRY DEVELOPMENT

		Rs. Crores.
1.	Cattle Development	26.88
2.	Dairy Development	12.87
3.	Animal Health	13.76
4.	Veterinary Biologicals	1.00
5.	Poultry Development	33.48
6.	Sheep Development	5.40
7.	Piggery Development	33.30
8.	Fodder and Feeds	79.70
9.	Veterinary Education and Research	9.00
10.	Organisational Set Up	1.00
	Total :	216.39

APPENDIX — II

BREEDS AND STRENGTH OF LIVESTOCK FARMS IN TAMIL NADU AS ON 31-3-1972

Name of Farm	*Breed*	*Cows*	*Heifers above one year*	*Total*
1. Hosur	Sindhi	227	134	361
	Jersey	4	3	7
	Friesian	10	3	13
	Jersey × Sindhi	102	32	134
	Friesian × Sindhi	—	—	—
2. Orathanad	Murrah	132	96	228
	Sindhi	136	91	227
	Umbalachery	50	33	83
	Sindhi—Umbalachery	62	28	90
3. Pudukottai	Sindhi	114	170	284
	Murrah	81	62	143
	Kangayam	42	28	70
	Brown Swiss	1	8	9
4. Chettinad	Murrah	62	34	96
	Tharparkar	95	67	162
5. Abishekapatti	Murrah	33	30	63
	Gir	26	17	43
6. Ooty	X-bred	92	39	131
7. Chinnasalem	Alamabadi	88	81	169

* * * * * *

Summary of Discussion

In the discussion of the paper at the Seminar on Thursday, 28th June, 1973 in the Seminar room of the Institute under the Chairmanship of Dr. Malcolm S. Adiseshiah, Director, Madras Institute of Development Studies, the expose summarised the paper based on the Perspective Plan for Tamil Nadu's Task Force Report on Animal Husbandry. The gap between availability and requirements of animal husbandry products and the strategy for increased production and improvement in the quality of cattle, sheep and goats, poultry and piggery as well as the derived projects of meat hygiene, veterinary research and improved medical facilities for this sector, production of sufficient feed and fodder came under review.

A critical assessment of the projects and outlays centred attention upon: (1) the report's assumption that increased availaibility would *ipso facto* mean increased consumption; (2) the full implications of the employment potential had yet to be worked out; (3) similar computation had to be made for income generation as well; (4) the absence of any survey which would assist a reliable forecast of anticipated demand; (5) the necessity for safeguards against malfunctioning of cooperatives; (6) the problem of matching feed and fodder production to the increase in animals and (7) the importance of inter departmental cooperation for the successful achievement of the targets.

It was pointed out that scarcely 40 per cent of the population of Tamil Nadu had the purchasing power to add items like milk, meat and eggs to their diet. An increase in production had to be preceded by rise in income if these items of food were to be consumed in greater quantity than the meagre intake at present. As far as the period of the fifth plan is concerned only the top three deciles are likely to increase consumption of these commodities. Any calculations, therefore, based on purely anticipated per capita consumption were bound to be misleading. An estimate of income distribution and precise information on the consumption pattern of these items by varied population groups would provide a more reliable basis for assessment of future needs. The consumption model for essential goods does not have, at present, an animal husbandry component. At current levels of living the producers find it uneconomic to consume these items.

A doubt was expressed whether the acreage as envisaged in the Task Force Report could be released for fodder production within the limited land resources of Tamil Nadu. However, it was pointed out that in the Task Force Report on Agriculture, provision for adequate acreage for feed and fodder has been made. Further it was felt that the green revolution and the higher yield of food grains could release the marginal percentage of land required.

A disquieting feature is the generally poor breed of the animals and birds and the resulting low yield of milk, meat and eggs. A systematic approach towards improvement in breed and quality is an absolute necessity for increased production and the possible consumption percolation to the lower income groups, at any event among the farming families. The insistence in the Task force Report on this aspect of animal husbandry development is of special importance.

In discussing consumption patterns and socio-economic factors, some interesting data emerged. For instance, a survey in

Dharmapuri revealed an unusually high consumption of eggs even compared to Madras. It was suggested that this could be due to lack of facilities for marketing the produce outside the district. Another feature was the comparatively high consumption of meat by some backward groups. An additional point was that the consumption of leafy vegetables was highest in Tamil Nadu among the Southern States.

While the report does not deal with an increase in purchasing power during the period of the Perspective Plan, the recommendations made are on the assumption of general economic improvement and increased effective demand. It is essentially a need based Report and on the whole brings to bear a modern approach to the development problems of this key sector.

SOCIAL SCIENCES IN ASIA *

My first task is to greet all of you, distinguished social scientists, to this Asian Conference on Teaching and Research in the Social Sciences. A particularly warm welcome goes out to the scientists from our neighbouring countries in this beloved continent of ours. To those of them who are visiting this country for the first time, I offer my cordial good wishes and hopes for a happy and fruitful sojourn. To those who are visiting us again, I express the thought that as in scholarship and friendship, repettition will make for richness and spiritual depth. We have a special word of welcome to the international fraternity of social scientists represented by UNESCO, which has generously contributed to this Asian social science rendezvous and by the International Social Science Council, whom we thank for all its international services to Asian Social Science. For all of us guests and hosts, Indian and other Asian social scientists, this meeting place, the Indian Institute of Advanced Study and this city of meeting, Simla are somewhat unique. We intend to leave aside our work a day preoccupations of teaching and testing, of writing and researching during the week we are here and take full advantage of the intellectually calm atmosphere and aesthetically pleasant location to dream together our dreams as social science teachers and researchers and envision our role as social scientists in the emerging, challenging, beckoning panorama of Asia.

Scope of Social Sciences :

Social Sciences are policy sciences. They determine social and national policy. They are new and old to us in Asia. They are new as a separate set of disciplines in this continent, as the question of such separate studies in traditional Asian higher centres of learning simply did not arise. Equally the social sciences are old, as Asian philosophy with its tradition of linking study with life, covered all fields of knowledge of men and the external world including mathematics and natural philosophy (which were the first to break away) and the conduct of man as an individual and a member of society. As we embark on the review of the social sciences in Asia, it is well that we remind ourselves of this somewhat contradictory character of this social discipline as a means of bringing to our task an attitude of intellectual humility which its newness imposes and the imperatives of synthesis, to which our evolving societies beckon, as does our hoary tradition.

As a set of disciplines, the first question that arises is what are the sciences which we shall cover in this conference. The yardstick which helps us to answer this question is a double one : it is first those disciplines which study man as a social being and second the disciplines which use the scientific method for their studies. Using this criteria, we will be dealing with four central disciplines economics, political science, sociology and psychology and five peripheral disciplines which also deal with social phenomena—anthropology, geography, history, law and linguistics. There is one outstanding gap in this enumeration. What of the mother social science discipline—philosophy of which all the other are the progeny? I am

---

*** Extracts from presidential address delivered by Dr. Malcolm S. Adiseshiah at the Asian Conference on Teaching and Research in Social Sciences on 21st May 1973 at Simla.**

convinced that the current lacunae in our work and review can be traced to our turning away from our tradition of philosophy, being both a study of metaphysical principles but even more, their derivation from and application to individual and social life. I would therefore suggest that we in Asia return to this tradition of ours by including the social science content of philosophy in the scope of social sciences.

Teaching :

A second issue before us is the review of the teaching of the social sciences, as just defined, in our universities. The picture presented in the documents before us is one of striking unevenness. There is unevenness in the quantity and quality of teaching both as between our universities and as between the disciplines. I trace this unevenness to the varying manner in which we in the universities have or have not answered the prior question as to the aims and functions of teaching the particular social science discipline. I mean by aims the results desired by the teaching and by functions the qualities developed in the students. Here it is important to remember that there are several options open to the teaching aims and functions. One is to train students who can be practitioners of the discipline, as an economic advisor, as a sociologist operating a tribal settlement, as a juridicial member of the ministry of company affairs, etc. This option can also be used by what I would call the non disciplinarian—that is one who is grounded in one discipline but acquires working skills in other disciplines. This is one practical professional option open to us. A second choice is to teach students to understand as completely as possible the nature of the social phenomena that the discipline deals with considered as a discipline *perse*. This is the grounding required of every social science teacher. This option combines the practical professional with the theoretical and scientific. There is yet a third choice which is for the teaching to concentrate on the scientific or theoretical aspects very heavily. This should be the foundation for the full-time researcher. This definition of the aims and functions of social science teaching has a moral. It is that there is need for some disaggregation of teaching in each discipline following the definition of its teaching aims and functions. What prevents such disaggregation is the vast and swelling numbers of under—graduates in the class room on the one hand and the mass magesterial teaching techniques on the other. I raise the question as to whether in the interest of effective teaching we should not disaggregate each discipline after a common core, not only on the basis of sub—disciplines, but also on the basis of the vocation of each student. Such disaggregation would also help to ground the discipline in our own Asian realities.

Teaching and Research :

A third related issue is the integral relation, amounting to unity, between social science teaching and research. The disaggregation of social science teaching in accordance with varied and varying teaching aims, the diversification of the teaching content of the social sciences, the updating and keeping in line with the explosive rate at which each discipline is developing, and above all the relationship of the content to the realities of each of our societies and each of our countries depend on the research input into the teaching programmes. Here we face several problems. There is the very practical problem of the teaching load on most of our teachers which leaves no surplus hours for research. In fact the typical question of a university Vice-Chancellor

when faced with a research project by one of his faculty is whether such research will not affect his teaching responsibilities. I have come to divide the faculty into work horses and teachers. The question therefore arises whether the teaching hours of a university professor should not be limited to 10 hours a week? And then there is the problem of the growing gap between the teaching content of the social science discipline and social reality. Here it is not only the individual teacher-researcher who can help to close the gap. There has to be some kind of collective action by the community of scholars in each discipline, if the structure and content of the teaching of political science or sociology or public administration or other science is to be grounded in the unique features of each society. Science is universal in its methodology; but it is particularistic in its substance. A related problem that some countries face is the growing volume of social science studies undertaken in the national languages and the lack of relation between these and the texts and documents in international languages that are in use. And then there is the data explosion that the teacher is confronted with. Every hour of every day data is flowing from the academic, commercial and governmental sources at an increasing rate and space. I find that even to read no more than the published abstracts in my sub-discipline, development economics, I would have to spend on it all my waking hours of every day. Where then is the time for the teacher to study and reflect over this out-pouring of data and accept, rearrange or modify the conclusions suggested or presented by the data. The archival and data bank infrastructure is today an essential for effective teaching.

Relevant Research :

A further issue raised in the papers before us is the question of the relevance of our social science research to our national needs and policies. UNESCO's recent General Conference in October, 1972 in adopting a general resolution embodying the main conclusions of the debate on the general policy of the organisation, states in this regard and for itself: "It would be desirable to consider introducing a comprehensive policy for the social sciences, humanities and natural sciences (so that) the various international programmes planned or launched by UNESCO should mature from such a policy . It would be desirable to enable philosophy and the social sciences to play a greater part in the analysis of the major problems of the modern world which are the subject of inter-sectoral programmes .. The social sciences should make a greater contribution to the elaboration and implementation of each sector's own programme". UNESCO thus defines relevance for itself as : (a) a multi-disciplinary policy out of which its programmes would be born; (b) an evaluational process to identify significant world problems and monitor project execution, (c) the development of social science research and research techniques in the immediate context of UNESCO's own programmes in education, natural sciences, cultural promotion and mass communication. This is a comprehensive definition of relevance. Each of us, as individual researchers, as universities, and research bodies have to define relevance for ourselves. One rather simplistic test of relevance is its end use. Behind all the country reports on social science research before us is the stark fact that so little of our research is used by the consumers in Government at the highest level in formulating policy and at the operational level by Government ministries, public or private firms, agricultural co-operatives and the applied research laboratories. Also so little of our research is a teaching input. And so much of our

research in the social sciences is irrelevant. Here we are in good company and have no reason to be too discouraged because the lofty UNESCO definition of relevance that I have just referred to has been in fact a search by it during the twenty-five years of its existence, and its potential users in the education, natural sciences, cultural and mass communication departments have also gone their own way, without regard to the research resources of its social sciences programme. What we should do at this conference is to agree upon a definition of relevance, make a finding of the extent of our irrelevance as researchers and decide on the time path, the means and the methods whereby our research can contribute to the development of the discipline, to national plan priorities and to national and social policy.

Multi-Disciplinarity :

When we look at our national plan demands, the disciplinary structure of our universities and institutions of learning—both in teaching and research terms—begins to wobble. In teaching a particular social science discipline in earlier times there used to be a nodding acquaintance with other disciplines. I can recall my first term as a student of economics being spent in examining the relation of economics to politics, to ethics, to history, to psychology etc. This part of teaching was no introduction to inter or multi-disciplinarity, it was primarily concerned with establishing the superiority of the discipline being studied, in this case economics, over all others. It certainly went against our intellectual tradition, that I have referred to earlier,—the integration of law, religion and morality which expressed itself in the political, economic and social code prescribed for the individual and society. However this part of social science pedagogy was in some ways an introduction to inter and multi-disciplinarities. And that is what the social science student, teacher and researcher is confronted with in his daily life in his society and in his country. He faces no economic problems, no sociological problems, no anthropological problems. He faces social problems, human problems' local problems and national problems, which are multiple calling for multiple policy instruments, multiple forms of inter action between the natural, agricultural, engineering and medical sciences on the one hand and social sciences on the other and multi-disciplinary teaching and research And here we are totally unprepared and unequipped. We stand naked as the papers before us reveal. The university disciplinary structure ignores problem and programme oriented research because it does not fit into the existing classification of discipline; it prevents communication and mobility of scientists, because each is living within a closed room, it makes impossible research on a problem or a set of problems which require more than one traditional scientific discipline to be used in their solution. Here the problem before us is how we can build into the existing discipline based universities, structures which can undertake inter-disciplinary and multi-disciplinary teaching and research, using the language, theoretical constructs and experimental techniques involved. Where as in a descriptive study of a rural community, juxtaposition of the disciplines is all that is necessary, such teaching and research can be accomplished by providing for some coordinating machinery between the departments That co-ordinating machinery may be as simple as providing for a longish coffee break in the university when professors and students from the different departments can talk and compare notes on the village. But where as in introduction of the new

agricultural technologies which call simultaneously for decentralization and consolidation, agrarian reform, eradication of poverty, urban-rural irrigation, development of retarded regions, and town and country planning, new linkages between scientific disciplines in long term projects have to be invented amounting to the integration of disciplines, new university structures are called for. And for non-university institutions and National Social Science Research Councils, the question is even more sharply posed as to whether their organisational structures should not eschew disciplinary foundations and bases, and whether instead they should not be structuring themselves around problems and programmes.

Status and Employment:

In the papers before us we do not have much information on the status of social scientists in our countries and the demand for and conditions of their employment. I have a hunch based on my knowledge of the countries that in neither status nor conditions of employment is the position satisfactory. Further the number of gifted students entering the social science field is declining and the number of social science researchers is being limited. In general the best students enter the engineering and technology field of studies, followed by medicine, by the natural and physical and agricultural sciences, so that it is the end of the queue which enters the social sciences area. This is really a case of the chicken and the egg circle. The demand, status and employment conditions for social scientists are low and so those entering this field of studies are both limited and are the second and third rankers. The quality of social scientists and their research are low and so the demand, status and employment conditions relating to them are low. It is not surprising that in our countries the common man has never heard of our existence. Even some of our business houses when I talk to them of social scientist, ask, social what? Given the national stakes in social science studies and research, however, I am of the opinion that one of the first tasks of the national social science research councils is to undertake a census of social scientists in the Country, their status and employment conditions and work with universities, public and private firms, research institutions and government departments inorder to widen the market for social scientists and make proposals for equating their status and employment conditions with that of the natural and physical scientists. This would be the counterpart to improving the quality of social science teaching and research that I have earlier suggested. This area might also be one where there could be fruitful inter-Asian cooperation.

Financing:

Another issue that we should face in the Conference is the level and mode of financing of social science teaching and research in our countries. In the teaching area, while the renovation of natural science and mathematics teaching at the primary and secondary school level and the improvement of their teaching at the University level are well in hand in all our countries with the support of UNESCO, UNDP, Colombo Plan, SEAMEC and bilateral governmental agencies, anything resembling such efforts in social science teaching is absent. In the renovation of the teaching of the social science disciplines in schools and universities we do need a little money from the State, but we need even more an organisation—a National Academy of Social Sciences, and the will to undertake the task. For financing of social science research and the development of suitable research institu-

tions inside and outside the universities, we need large resources and I do believe that it is the absence and assurance of such resources which acts as a major constraint today in our countries to the development of the much needed social science research on a continuous and continuing basis. In this regard UNESCO has recommended at the CASTASIA Conference in August 1968 that Asian countries should, by the end of the Second development Decade, allocate as a minimum I per cent of their GNP to research and experimental development. The United Nations Advisory Committee on Science and Technology (ACAST) has made a similar recommendation, 1 per cent of GNP for scientific research, to all of us developing countries in Asia, Africa and Latin America. (More recently in March 1973 ACAST has also recommended that 10 per cent of the developed countries aid of the 1 per cent of their GNP should be in Research and Development, including 5 per cent of their civilian R & D). In India it has been agreed that the NCST (National Committee on Science and Technology) can proceed on the basis that the national investment on R & D during the Fifth Plan (which starts on 1 April 1974) would be such "that a figure in the general neighbourhood of 1 per cent of the GNP is likely to be avail able in the last year of the Fifth Plan." The present position is that this Country is spending annually about Rs. 2,500 million on research and development in the natural, technological, agricultural and medical sciences and around Rs. 25 million on research in the social sciences. This, I believe, is a serious imbalance. I would suggest that this Conference review this crucial problem of financing and method of financing social science research on an adequate and continuing basis in our countries. I further suggest for your reflection that one way would be for the Conference to recommend that social science research be regarded as an integral part of the total scientific research effort by each of our countries and that by the end of the Second Development Decade, 5-6 per cent of the 1 per cent GNP research target be allocated to social science research.

Inter Asian Co-operation in the Social Sciences :

And finally we should face the serious lacunae in the area of Inter Asian Social Science Co-operation. The lacunae here are individual and institutional. As individual social scientists we must confess the fact that we are far more conversant with the work of our European or North American fellow scientists than we are with that of our Asian colleagues. Ask any economist, sociologist, anthropologist or psychologist about the sources of his research or text book for his teaching and he will reel off the names of fellow disciplinarians in the U.S., U.K., Germany, Sweden, U.S.S.R., etc. in that order. It is not surprising therefore that our teaching content and pattern is alien to our continent, that our research models and constructs are entirely Western. In fact the ignorance of the social science work of our colleagues in Asia has been described by one of my psychology friends as one of "studied inattention and total indifference" to work going on in our own region, in which we share so many common socio-economic, political, psychological and cultural patterns. Can this Conference be a first step in remedying this grievous wrong and is there a possibility of our suggesting an Asian Abstracts Service in one or two disciplines – economics and political science—to begin with, so that we can begin to know of each other's work? At the institutional level, the lack of contact between the national social science research councils in Asia is

even marked. Our associations and councils are in constant and close contact with UNESCO, ISSC and the North American and European Councils and this fruitful co-operation we should and must continue. But an even more fruitful area of co-operation would be the working of an Asian Council or Association of Social Science Councils, which would be more fruitful because it will help us to join forces in developing the sciences in relation to our social structures, in mounting common research programmes, in avoiding duplication and waste of our limited research resources, and through an abstracts service that I have referred to in helping us to know each other and grow as Asian Social Scientists in the service of man and society in this continent and for all continents.

MADRAS INSTITUTE OF DEVELOPMENT STUDIES PUBLICATIONS

Publishers: (from whom copies may be ordered)
M/s. Sangam Publishers,
11, Sunkurama Chetty Street,
Madras-1.

I. Books Published:

1. Income Earning Trends and Social Status of the Harijan Community in Tamil Nadu

   By A. Vagiswari (Price Rs. 10/-) Demy 8VO

2. Economics of Dry Farming in Tamil Nadu

   By R. K. Sampath and Jayalakshmi Ganesan (Price Rs. 12/-) Demy 8VO

3. Nutrition in Tamil Nadu

   By Rajammal P. Devadas (Price Rs. 12/-) Demy 8VO

4. Techniques of Perspective Planning

   Edited by Malcolm S. Adiseshiah. (Price Rs. 9-40) Crown Quarto

   (This is a joint MIDS and ITES enterprise published by Tamil Nadu Government Press from whom it can be purchased)

II. In print:

5. A Guide to Research in Economics

   Edited by C. T. Kurien (Out by August, 1973)

III. Future Publications:

6. Land Reform in Tamil Nadu

   By G. Venkataramani

7. A State-wide Programme for the Low Price Supply of Wage Goods

   By M. Ramamurthy

8. Rural Employment in Tamil Nadu

   By J. Viswanathamurthy

9. Introduction to Mathematical Economics and Economics Statistics

   By N. Rajagopala Rao
   V. Lakshmana Rao

10. Rural Primary Education and Adult Literacy in Tamil Nadu

    By Alexander Joshua

Regd. No. M. 8831

MADRAS INSTITUTE

OF

DEVELOPMENT STUDIES

(M I D S)

The Institute founded and run by Dr. Malcolm S. Adiseshiah is a charitable trust registered under the Madras Charitable Trusts Act.

The aim of the Institute is to contribute to the economic and social development in Tamil Nadu and India.

The activities of the Institute are :

— Studies and action-oriented research in micro-development problems ;

— Documentation and library service in development programmes ;

— Exchange and dialogue at the State, National and International levels on development issues ;

— Publication of papers and research results of the institute.

St. Louis Institute Press, Canal Bank Road, Adyar, Madras-20
Editor : Dr. Malcolm S. Adiseshiah